Angelo, R. and D.E. Boufford. 2013. Atlas of the flora of New England: Families of vols. 6 & 14: Flora of North America. Phytoneuron 2013-45: 1–23 + map pages 1–30. Published 10 July 2013. ISSN 2153 733X

ATLAS OF THE FLORA OF NEW ENGLAND: FAMILIES OF VOLS. 6 & 14: FLORA OF NORTH AMERICA

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ABSTRACT

Dot maps are provided to depict the distribution at the county level of the taxa of Magnoliophyta: Families of volumes 6 and 14 of Flora of North America growing outside of cultivation in the six New England states of the northeastern United States. The maps treat 258 taxa (species, subspecies, varieties, and hybrids, but not forms) based primarily on specimens in the major herbaria of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut, with most data derived from the holdings of the New England Botanical Club Herbarium (NEBC). Brief synonymy (to account for names used in standard manuals and floras for the area and on herbarium specimens), habitat, chromosome information, and common names are also provided.

KEY WORDS: flora, New England, atlas, distribution, Cucurbitales, Malvales, Solanales, Apocynaceae, Cistaceae, Convolvulaceae, Cucurbitaceae, Gentianaceae, Hypericaceae, Malvaceae, Solanaceae, Violaceae

This article is the twelfth in a series (Angelo & Boufford 1996, 1998, 2000, 2007, 2010, 2011a, 2011b, 2012a, 2012b, 2012c, 2013) that presents the distributions of the vascular flora of New England in the form of dot distribution maps at the county level (Figure 1). Three more articles are planned. The atlas is posted on the internet at <http://neatlas.org>, where it will be updated as new information becomes available.

This project encompasses all vascular plants (lycophytes, pteridophytes and spermatophytes) at the rank of species, subspecies, and variety growing independent of cultivation in the six New England states. Hybrids are also included, but forms and other ranks below the level of variety are not. The dots are based on voucher specimens primarily in New England herbaria (of colleges, universities, botanical gardens, and public museums) representing reproducing populations outside of cultivated habitats. This twelfth installment includes the families that will be included in volumes 6 and 14 of the Flora of North America North of Mexico. Of the 258 taxa treated, 113 are not native to the region. Future accounts will treat the distribution of additional non-monocot angiosperms.

The habitat data are distillations from a variety of sources augmented by our own field observations. An attempt was made to indicate habitat information as it applies to a particular taxon in New England rather than to the entire range of the taxon. Habitat information is not provided for hybrid taxa.

It is our hope that these articles will stimulate additional field work to supplement the distributions portrayed in the maps. The New England Botanical Club herbarium has proven to be the most important resource for this project. We are eager to receive information on voucher specimens in public herbaria documenting range extensions and filling county gaps in distributions. Similarly, because the atlas of the New England flora will be continuously updated as new information becomes

available, we are eager to receive notification of published corrections of cytological information and new, documented chromosome counts for taxa in the New England flora.

MATERIALS AND METHODS

Materials and methods are as outlined in Angelo and Boufford (1996) and in a web version (Angelo & Boufford 2011c) and are not repeated here.

TAXONOMY AND FORMAT

The taxonomy and nomenclature adopted for this work primarily follow that of draft treatments for the Flora of North America project and checklists of accepted taxa of The Flora of North America Expertise Network, except that families, genera, and species are arranged alphabetically. The families and their circumscription do not necessarily reflect current views on relationships or composition. The Angiosperm Phylogeny Website (Stevens 2001 onwards) should be consulted for a continuously updated treatment of families and their inclusive genera. Named and unnamed hybrid taxa are placed alphabetically at the end of the genus in which they occur. Unnamed hybrids combine the names of the progenitors alphabetically by epithet. Taxa that are not native to New England are indicated by uppercase text. Unpublished names are not used, even if publication is pending.

Chromosome numbers are taken primarily from draft treatments for the Flora of North America project and from Goldblatt and Johnson (1979–).

Synonymy is provided primarily with respect to names accepted in standard manuals covering New England published from 1950 onward, including Fernald (1950), Gleason and Cronquist (1991), and Seymour (1982) and on herbarium labels in New England herbaria. Synonyms have not been provided where the distribution for the synonymized name does not include New England.

The following list (which includes excluded taxa) will aid readers in finding familiar names that have been transferred to other taxa:

ASCLEPIADACEAE	=>	*APOCYNACEAE*
Centaurium (in part)	=>	*Schenkia*
Chamaesaracha (in part)	=>	*Leucophysalis*
CLUSIACEAE (in part)	=>	*HYPERICACEAE*
Convolvulus (in part)	=>	*Calystegia*
CUSCUTACEAE	=>	*CONVOLVULACEAE*
Gentiana (in part)	=>	*Gentianella*
Gentiana (in part)	=>	*Gentianopsis*
GENTIANACEAE (in part)	=>	*MENYANTHACEAE*
GUTTIFERAE	=>	*HYPERICACEAE*
Helianthemum	=>	*Crocanthemum*
Hypericum (in part)	=>	*Triadenum*
Lycopersicon	=>	*Solanum*
TILIACEAE	=>	*MALVACEAE*
Wissadula (in part)	=>	*Pseudabutilon*

The following species have been reported from our area but are excluded for the reasons noted:

Asclepias tuberosa Linnaeus subsp. *interior* Woodson [no voucher found; reported from New London County, Connecticut]

BROWALLIA AMERICANA Linnaeus (*B. VISCOSA* misapplied) [no voucher of wild occurrence found; reported from New Haven County, Connecticut, and Norfolk County, Massachusetts]

CONVOLVULUS WALLICHIANUS Sprengel [no voucher found; reported from Aroostook County, Maine]

CUSCUTA CUSPIDATA Engelmann [no voucher found; reported from New Haven County, Connecticut]

Cuscuta obtusiflora Kunth var. *glandulosa* Engelmann [reported in error from three counties in Connecticut based on 1917 literature that used *C. obtusiflora* in the sense of Gray's Manual of Botany, 7th edition, which is *C. polygonorum* Engelmann]

HYPERICUM DOLABRIFORME Ventenat [insufficient evidence of wild occurrence; The only voucher is the type specimen for *H. BISSELLII* B.L. Robinson from Hartford County, Connecticut, which simply notes the road where it was found.]

IPOMOEA QUAMOCLIT Linnaeus [no voucher of wild occurrence found; reported from Windsor County, Vermont]

IPOMOEA TRICOLOR Cavanilles [no voucher of wild occurrence found; reported from Middlesex County, Massachusetts]

LAGENARIA SICERARIA (Molina) Standley [no vouchers found; reported from Suffolk and Worcester Counties, Massachusetts]

Lechea racemulosa Michaux [no vouchers found; reported from Connecticut; a specimen at NY collected in 2000 in a gravel quarry in Washington County, Maine, is deemed most likely to be misidentified as it is well outside the known range]

MODIOLA CAROLINIANA (Linnaeus) G. Don [no voucher of wild occurrence found; reported from Hampshire County, Massachusetts]

NICOTIANA × *SANDERAE* W. Watson (*pro species*) (*N. ALATA* Link & Otto × *N. FORGETIANA* Sander) [no voucher of wild occurrence found; reported from Norfolk County, Massachusetts]

PHYSALIS MISSOURIENSIS Mackenzie & Bush [no voucher found; reported from Massachusetts]

PHYSALIS PHILADELPHICA Lamarck var. *PHILADELPHICA* [no vouchers found; reported from Massachusetts and Vermont]

PHYSALIS PUBESCENS Linnaeus var. *INTEGRIFOLIA* (Dunal) Waterfall [specialist in this genus has found no New England vouchers (Dr. Janet Sullivan, pers. comm.).

Vouchers with this name or misapplied "*P. PRUINOSA*" are likely to be *P. grisea* (Waterfall) M. Martínez]

SABATIA ANGULARIS (Linnaeus) Pursh [no voucher of wild occurrence found; reported from Essex County, Massachusetts, and Connecticut; specimen at YU with locality simply "Connecticut" does not specify habitat]

SABATIA DODECANDRA (Linnaeus) Britton, Sterns & Poggenburg [no vouchers found; reported from Middlesex, New Haven and New London Counties, Connecticut]

SCHIZANTHUS PINNATUS Ruiz & Pavón [no voucher of wild occurrence found; reported from Connecticut]

SOLANDRA GRANDIFLORA Swartz [no voucher found; reported from York County, Maine]

SPHAERALCEA FENDLERI A. Gray subsp. *FENDLERI* [vouchers for this species are apparently misidentified *SPHAERALCEA MENDOCINA* (Philippi) K. Schumann; reported from Middlesex County, Massachusetts]

TAMARIX GALLICA Linnaeus [no voucher found; reported from Suffolk County, Massachusetts]

TILIA PETIOLARIS de Candolle [no voucher of wild occurrence found; reported from Suffolk County, Massachusetts]

VIOLA BICOLOR Pursh (*V. KITAIBELIANA* Schultes var. *RAFINESQUII* (Greene) Fernald; *V. RAFINESQUII* {sometimes as "*RAFINESQUEI*"} Greene) [no vouchers found; reported from Connecticut, Massachusetts, and Rhode Island]

VIOLA CANINA Linnaeus [specimen from Windsor County, Vermont, lacks habitat information to determine whether it is of wild or cultivated origin]

Viola hirsutula Brainerd [no voucher found; reported from Fairfield County, Connecticut]

VIOLA JAPONICA Langsdorff & Gingins [no voucher of wild occurrence found; reported from Middlesex County, Massachusetts]

VIOLA SEPTEMLOBA Leconte [no vouchers found; reported from Fairfield County, Connecticut, and Washington County, Rhode Island]

Viola × *consocia* House (*V. affinis* Leconte × *V. cucullata* Aiton) [no vouchers found; reported from Connecticut and Vermont]

Viola × *cordifolia* (Nuttall) Schweinitz (*pro species*) (*V. hirsutula* Brainerd × *V. sororia* Willdenow) [no voucher found; reported from Connecticut]

Viola × *eamesii* House (*V. brittoniana* Pollard × *V. palmata* Linnaeus var. *palmata*) [no voucher found; reported from Connecticut]

Viola × *napae* House (*V. nephrophylla* Greene × *V. sororia* Willdenow) [no voucher found; reported from Vermont]

VIOLA × *WITTROCKIANA* Gams *ex* Nauenberg & Buttler (*V. ALTAICA* Ker Gawler × *V. LUTEA* Hudson or *V. TRICOLOR* Linnaeus var. *TRICOLOR*) [no voucher of wild occurrence found; reported from Worcester County, Massachusetts]

ANGIOSPERMAE (MAGNOLIOPHYTA) – ANGIOSPERMS

APOCYNACEAE

AMSONIA TABERNAEMONTANA Walter var. *TABERNAEMONTANA*—Eastern Bluestar (Figure 2). $2n = 22$. Waste places. From farther south and west.

Apocynum androsaemifolium Linnaeus—Spreading Dogbane (Figure 2). $2n = 16, 22$. Roadsides, dry fields, thickets, woodland margins.

Apocynum cannabinum Linnaeus—Indian Hemp (Figure 2). $2n = 16, 22$. Shores, thickets, woodland margins, open ground. [*A. cannabinum* var. *pubescens* (R. Brown) A. de Candolle; *A. sibiricum* Jacquin var. *sibiricum*; *A. sibiricum* var. *cordigerum* (Greene) Fernald]

— *Apocynum* hybrid —

Apocynum × *floribundum* Greene (*pro sp.*)— (Figure 2). [*A. androsaemifolium* Linnaeus × *A. cannabinum* Linnaeus; *A. medium* Greene]

Asclepias amplexicaulis Smith—(Figure 2). $2n = ?$ Dry, open, sandy soil in woods, thickets, fields, roadsides. [*A. obtusifolia* Michaux]

Asclepias exaltata Linnaeus—Poke Milkweed (Figure 2). $2n = 22$. Rich woods, woodland margins, clearings, thickets. [*A. phytolaccoides* G.F. Lyon *ex* Pursh]

Asclepias incarnata Linnaeus subsp. *incarnata*—Swamp Milkweed (Figure 2). $2n = 22$. Swamps, pond shores, wet thickets, meadows and fields.

Asclepias incarnata Linnaeus subsp. *pulchra* (Ehrhart *ex* Willdenow) Woodson—Hairy Milkweed (Figure 2). $2n = ?$ Swamps, pond shores, wet thickets, meadows and fields.

Asclepias purpurascens Linnaeus—Purple Milkweed (Figure 2). $2n = ?$ Dry woods, woodland margins, thickets, openings, roadsides, dry fields.

Asclepias quadrifolia Jacquin—(Figure 3). $2n = ?$ Rich, dry woods, often rocky and circumneutral or calcareous.

Asclepias syriaca Linnaeus—Common Milkweed (Figure 3). $2n = 22$. Roadsides, fields, meadows, thickets, railroad banks.

Asclepias tuberosa Linnaeus subsp. *tuberosa*—Butterfly-weed (Figure 3). $2n = 22$. Dry, open soil, roadsides, fields.

Asclepias variegata Linnaeus—White Milkweed (Figure 3). $2n$ = ? Dry, wooded hillsides, thickets.

Asclepias verticillata Linnaeus—(Figure 3). $2n$ = 22. Dry woods, open, often rocky, soil, fields, railroad banks.

Asclepias viridiflora Rafinesque—Green Milkweed (Figure 3). $2n$ = 22. Sandy fields, openings, roadsides.

— *Asclepias* hybrids —

Asclepias amplexicaulis Smith × *A. exaltata* Linnaeus—(Figure 3).

Asclepias amplexicaulis Smith × *A. syriaca* Linnaeus—(Figure 3).

PERIPLOCA GRAECA Linnaeus—Silk-vine (Figure 3). $2n$ = 22, 24. Roadsides, upper part of rocky beach. From Eurasia.

VINCA HERBACEA Waldstein & Kitaibel—(Figure 4). $2n$ = 46, 92. Terraces and wooded slope of riverbank. From Eurasia.

VINCA MAJOR Linnaeus—Large Periwinkle (Figure 4). $2n$ = 90, 92. Waste places. From Eurasia. [*V. MAJOR* var. *VARIEGATA* Loudon]

VINCA MINOR Linnaeus—Common Periwinkle (Figure 4). $2n$ = 46. Roadsides, cemeteries, waste places, open woods near habitation. From Eurasia.

VINCETOXICUM NIGRUM (Linnaeus) Moench—Black Swallow-wort (Figure 4). $2n$ = 22, 44. Roadsides, waste places, thickets, cemeteries, field margins. From southern Europe. [*CYNANCHUM LOUISEAE* Kartesz & Gandhi; *C. NIGRUM* (Linnaeus) Persoon, non Cavanilles]

VINCETOXICUM ROSSICUM (Kleopow) Barbaricz—Pale Swallow-wort (Figure 4). $2n$ = ? Roadsides, waste places, cemeteries, field margins. From eastern Europe. [*Cynanchum nigrum* Kleopow]

CISTACEAE

Crocanthemum bicknellii (Fernald) Janchen—Hoary Frostweed (Figure 4). $2n$ = 20. Dry, sandy soil in the open, roadsides, open woods. [*Helianthemum bicknellii* Fernald]

Crocanthemum canadense (Linnaeus) Britton—(Figure 4). $2n$ = 20. Dry, sandy or rocky soil in the open, roadsides, open woods, ledges. [*Helianthemum canadense* (Linnaeus) Michaux var. *canadense*; *H. canadense* var. *sabulonum* Fernald]

Crocanthemum dumosum E.P. Bicknell—(Figure 4). $2n$ = ? Dry, sandy soil in the open, open woods. [*Helianthemum dumosum* (E.P. Bicknell) Fernald]

Crocanthemum propinquum (E.P. Bicknell *ex* Britton) E.P. Bicknell—(Figure 4). $2n$ = ? Dry, sandy soil in the open, roadsides, open woods, fields. [*Helianthemum propinquum* E.P. Bicknell *ex* Britton]

Hudsonia ericoides Linnaeus—Golden-heather (Figure 5). $2n$ = 20. Sandy or rocky acidic, open soil, dunes, barrens, roadsides. [*H. tomentosa* Nuttall var. *intermedia* Peck]

Hudsonia tomentosa Nuttall—Beach-heath (Figure 5). $2n$ = 20. Sandy, open soil, dunes, beaches, sandy shores.

— *Hudsonia* hybrid —

Hudsonia ericoides Linnaeus × *Hudsonia tomentosa* Nuttall—(Figure 5).

Lechea intermedia Leggett *ex* Britton var. *intermedia*—(Figure 5). $2n$ = 18. Dry, open, sterile, sandy or rocky soil.

Lechea intermedia Leggett *ex* Britton var. *juniperina* (E.P. Bicknell) B.L. Robinson—(Figure 5). $2n$ = ? Dry, open, sterile, sandy or rocky soil.

Lechea maritima Leggett *ex* Britton var. *maritima*—Beach Pinweed (Figure 5). $2n$ = ? Sandy, open soil, usually near the sea, dunes, beaches, roadsides, waste places.

Lechea minor Linnaeus—Thyme-leaved Pinweed (Figure 5). $2n$ = ? Dry, sandy soil, pond shores, pine-oak woodlands, roadsides.

Lechea mucronata Rafinesque—Hairy Pinweed (Figure 5). $2n$ = ? Dry, sandy or gravelly open soil, pine-oak and oak-hickory woodland margins, fields, roadsides. [*L. villosa* Elliott]

Lechea pulchella Rafinesque var. *pulchella*—(Figure 5). $2n$ = ? Dry, pine-oak and oak-hickory woods, clearings, fields, pond shores, usually on sandy soil. [*L. leggettii* Britton & Hollick var. *leggettii*]

Lechea pulchella Rafinesque var. *moniliformis* (E.P. Bicknell *ex* Britton) Mohlenbrock—(Figure 6). $2n$ = ? Sandy soil, frequently damp. [*L. leggettii* Britton & Hollick var. *moniliformis* (E.P. Bicknell *ex* Britton) Hodgdon]

Lechea tenuifolia Michaux—(Figure 6). $2n$ = ? Dry, sandy fields, sandy or rocky woodland openings and margins, primarily oak or oak-pine woodlands.

— *Lechea* hybrids —

Lechea maritima Leggett *ex* Britton var. *maritima* × *L. minor* Linnaeus—(Figure 6).

Lechea maritima Leggett *ex* Britton var. *maritima* × *L. mucronata* Rafinesque—(Figure 6).

CONVOLVULACEAE

CALYSTEGIA PUBESCENS Lindley—(Figure 6). $2n$ = ? Waste places, fields, roadsides, riverbanks. From eastern Asia. [*C. hederacea* misapplied; *Convolvulus japonicus* misapplied; *C. pellitus* misapplied]

CALYSTEGIA SEPIUM (Linnaeus) R. Brown subsp. *SEPIUM*—(Figure 6). $2n$ = 22. Waste places. From Eurasia, northern Africa. [*CONVOLVULUS SEPIUM* Linnaeus var. *SEPIUM*] Note: The draft of the Flora of North America treatment of *Calystegia* asserts that this taxon is a rare introduction and has not been found in New England, implying that most or all of the records under this name in New England herbaria are misidentifications.

Calystegia sepium (Linnaeus) R. Brown subsp. *americana* (Sims) Brummitt—Wild Morning-glory (Figure 6). $2n$ = 22. Coastal and subcoastal rocky shores, salt marshes, grassy banks, waste areas. [*Convolvulus sepium* Linnaeus var. *americanus* Sims; *C. sepium* var. *pubescens* sensu Gray's Manual 7th edition]

Calystegia sepium (Linnaeus) R. Brown subsp. *angulata* Brummitt—(Figure 6). $2n$ = ? Riverbanks, roadsides, waste places. [*Convolvulus sepium* Linnaeus var. *repens* misapplied]

Calystegia sepium (Linnaeus) R. Brown subsp. *appalachiana* Brummitt—(Figure 6). $2n$ = ? Roadsides, waste places, usually in upland areas.

Calystegia silvatica (Kitaibel) Grisebach subsp. *fraterniflora* (Mackenzie & Bush) Brummitt—Twin-flowered Morning-glory (Figure 7). $2n$ = ? Grassy banks, fields, thickets, roadsides, waste places. [*Convolvulus sepium* (Linnaeus) R. Brown var. *fraterniflorus* Mackenzie & Bush]

Calystegia spithamaea (Linnaeus) Pursh subsp. *spithamaea*—Upright Bindweed (Figure 7). $2n$ = 22. Sandy or rocky, open soil, thin woodlands, roadsides. [*Convolvulus spithamaeus* Linnaeus]

CONVOLVULUS ARVENSIS Linnaeus—Field Bindweed (Figure 7). $2n$ = 24, 48, 50. Fields, roadsides, waste places. From Eurasia, northern Africa.

CUSCUTA APPROXIMATA Babington—Alfalfa Dodder (Figure 7). $2n$ = 28. Damp meadows, typically parasitic on *Medicago* and *Trifolium*. From Eurasia, northern Africa.

CUSCUTA CAMPESTRIS Yuncker—(Figure 7). $2n$ = 28, 56. Street gutter on *Persicaria*. From farther west and south, Caribbean.

Cuscuta cephalanthi Engelmann—Buttonbush Dodder (Figure 7). $2n$ = 60. Alluvial woodlands, riverbank thickets, *Sphagnum* bogs, marsh margins, parasitic on coarse herbs and shrubs.

Cuscuta compacta Jussieu *ex* Choisy var. *compacta*—(Figure 7). $2n$ = ? Low woods and thickets, parasitic on various shrubs and coarse herbs.

Cuscuta coryli Engelmann—Hazel Dodder (Figure 7). $2n$ = 30. Dry, gravelly and sandy beaches, dryish, sandy, old fields, moist woods, pond margins, parasitic on various herbs and shrubs, especially Asteraceae such as *Euthamia, Eurybia, Solidago* and *Symphyotrichum*.

CUSCUTA EPILINUM Weihe—Flax Dodder (Figure 7). $2n = 42$. Parasitic on flax (*Linum*). From western and central Asia.

CUSCUTA EPITHYMUM (Linnaeus) Linnaeus—Clover Dodder (Figure 8). $2n = 14$. Parasitic on herbs, especially *Medicago*, *Trifolium* and other herbaceous Fabaceae. From Eurasia, northern Africa.

CUSCUTA EUROPAEA Linnaeus—Greater Dodder (Figure 8). $2n = 14$. Hedge at field margin, low thicket, parasitic on *Solidago* and various other herbs and shrubs. From Eurasia, northern Africa.

Cuscuta gronovii Willdenow *ex* Roemer & Schultes var. *gronovii*—Common Dodder (Figure 8). $2n = 60$. Low grounds, parasitic on many coarse herbs and shrubs. [*C. gronovii* var. *latiflora* Engelmann]

CUSCUTA INDECORA Choisy var. *INDECORA*—(Figure 8). $2n = 30$. Dry, sandy or gravelly shores, parasitic on various herbs and shrubs, especially Asteraceae (such as *Euthamia, Solidago* and *Symphyotrichum*). From farther west and south.

Cuscuta pentagona Engelmann—(Figure 8). $2n$ = ca. 44, 56. Dry, open soil, parasitic on many herbs.

Cuscuta polygonorum Engelmann—Smartweed Dodder (Figure 8). $2n = ?$ Pond shores, river thickets, parasitic on *Polygonum*, *Lycopus* and other herbs. [*C. obtusiflora* sensu Gray's Manual 7th edition]

IPOMOEA COCCINEA Linnaeus—Red Morning-glory (Figure 8). $2n = 28, 30$. Thickets, roadsides, waste places. From farther south.

IPOMOEA HEDERACEA Jacquin—(Figure 8). $2n = 30$. Fields, pond shores, roadsides, waste places. From Mexico, Central America, western South America, Caribbean. [*I. HIRSUTULA* misapplied]

IPOMOEA HEDERIFOLIA Linnaeus—Scarlet Creeper (Figure 8). $2n = 56$. Roadsides, waste places. From farther south, Central and South America, Caribbean.

IPOMOEA LACUNOSA Linnaeus—White Morning-glory (Figure 9). $2n = 30$. Waste places, railroads. From farther south and west.

Ipomoea pandurata (Linnaeus) G. Meyer—Wild Potato-vine (Figure 9). $2n = 30$. Dry fields.

IPOMOEA PURPUREA (Linnaeus) Roth—Common Morning-glory (Figure 9). $2n = 30$. Roadsides, field margins, waste places. From tropical America. [*I. HIRSUTULA* J. Jacquin]

CUCURBITACEAE

CITRULLUS COLOCYNTHIS (Linnaeus) Schrader—Vine-of-Sodom (Figure 9). $2n = 22$. Open, disturbed areas, sandy beaches. From the Mediterranean region, southwestern Asia.

CITRULLUS LANATUS (Thunberg) Matsumura & Nakai subsp. *LANATUS*—Watermelon (Figure 9). $2n = 22$. Waste places, freshwater shores. From southern Africa, most likely. [*C. VULGARIS* Schrader]

CUCUMIS ANGURIA Linnaeus var. *ANGURIA*—Bur Gherkin (Figure 9). $2n = 24$. Wool waste. From central and southern Africa.

CUCUMIS MELO Linnaeus subsp. *MELO*—Cantaloupe (Figure 9). $2n = 24$. Waste places. From southwestern Asia.

CUCUMIS MELO Linnaeus subsp. *AGRESTIS* (Naudin) Pangolo—(Figure 9). $2n = 24$. Moist, sandy, waste places. From Asia, probably.

CUCUMIS MYRIOCARPUS Naudin—Paddy Melon (Figure 9). $2n = 24$. Waste places. From southern Africa.

CUCUMIS SATIVUS Linnaeus var. *SATIVUS*—Cucumber (Figure 10). $2n = 14, 28$. Waste places. From India.

CUCURBITA MAXIMA Duchesne—Winter Squash (Figure 10). $2n = 40$. Waste places. From South America.

CUCURBITA PEPO Linnaeus subsp. *PEPO*—Pumpkin (Figure 10). $2n = 40$. Waste places, roadsides, sandy beaches. From Mexico, South America. [*C. PEPO* var. *MELOPEPO* (Linnaeus) Harz; *C. PEPO* var. *OVIFERA* (Linnaeus) Harz]

Echinocystis lobata (Michaux) Torrey & A. Gray—Wild Cucumber (Figure 10). $2n = 32$. Moist or wet thickets, rich soil along streams, meadows, roadsides.

MOMORDICA CHARANTIA Linnaeus—Bitter Melon (Figure 10). $2n = 22$. Waste places. From tropical Africa, tropical Asia, northeastern Australia, south central and southwestern Pacific.

Sicyos angulatus Linnaeus—Bur cucumber (Figure 10). $2n = 24$. River thickets, swamp margins, meadows, damp soil, roadsides, waste places.

THLADIANTHA DUBIA Bunge—Red Hailstone (Figure 10). $2n = 18$. Waste places. From eastern Asia.

DROSERACEAE

Drosera anglica Hudson—(Figure 10). $2n = 40$. Calcareous bogs and fens in *Sphagnum.*

Drosera filiformis Rafinesque—Dew-thread (Figure 10). $2n = 20$. Sandy pond shores.

Drosera intermedia Hayne—(Figure 11). $2n = 20$. Acidic sand or *Sphagnum* of bogs, swamps, shores.

Drosera linearis Goldie—(Figure 11). $2n = 20$. Calcareous bogs and fens in *Sphagnum.*

Drosera rotundifolia Linnaeus var. *rotundifolia*—Round-leaved Sundew (Figure 11). $2n$ = 20. Sphagnous or acidic soil of bogs, swamps, fens, shores, seepages. [*D. rotundifolia* var. *comosa* Fernald]

FRANKENIACEAE

FRANKENIA PULVERULENTA Linnaeus—European Sea-heath (Figure 11). $2n$ = 20. Wool waste. From Mediterranean region, southwestern Asia.

GENTIANACEAE

Bartonia paniculata (Michaux) Muhlenberg subsp. *paniculata*—Screw-stem (Figure 11). $2n$ = 52. Swamps, wet woods, bogs, sphagnous or sandy pond and lake margins, meadows.

Bartonia paniculata (Michaux) Muhlenberg subsp. *iodandra* (B.L. Robinson) J.M. Gillett—(Figure 11). $2n$ = ? Bogs, sphagnous lake and pond margins.

Bartonia virginica (Linnaeus) Britton, Sterns & Poggenburg—(Figure 11). $2n$ = 52. Meadows, clearings, fields, mounds in swampy woods, bog margins, wet, open woods, acid soil.

CENTAURIUM ERYTHRAEA Rafn—Common Centaury (Figure 11). $2n$ = 20, 40, 42. Fields, waste places. From Eurasia, northern Africa. [*C. MINUS* Garsault, illegitimate name; *C. UMBELLATA* Gilibert, illegitimate name]

CENTAURIUM PULCHELLUM (Swartz) Hayek *ex* Handel-Mazzetti, Stadlemann, Janchen & Faltis—Lesser Centaury (Figure 11). $2n$ = 36. Waste places, roadsides, railroads, open sandy or gravelly areas. From Eurasia.

FRASERA ALBICAULIS Grisebach var. *NITIDA* (Bentham) C.L. Hitchcock—(Figure 12). $2n$ = ? Dry hills. From farther west.

Gentiana andrewsii Grisebach var. *andrewsii*—(Figure 12). $2n$ = 26. Meadows, low thickets, moist, open woods, swamps.

Gentiana clausa Rafinesque—Bottle Gentian (Figure 12). $2n$ = 26. Streambanks, moist woodland margins, meadows, moist thickets.

GENTIANA CRUCIATA Linnaeus—Star Gentian (Figure 12). $2n$ = 52. Gravel banks. From Eurasia.

Gentiana linearis Froelich—Narrow-leaved Gentian (Figure 12). $2n$ = 26. Bogs, meadows, thickets, shores, generally acid soils.

Gentiana rubricaulis Schweinitz—Great Lakes Gentian (Figure 12). $2n$ = ? Cleared ground, swales, fens, meadows, calcareous soils.

Gentianella amarella (Linnaeus) Börner subsp. *acuta* (Michaux) J.M. Gillett—Felwort (Figure 12). $2n$ = 18, 36. Riverbanks, alpine brooks, generally moist, rocky or gravelly, calcareous soil. [*Gentiana amarella* Linnaeus (in part)]

Gentianella quinquefolia (Linnaeus) Small subsp. *quinquefolia*—Stiff Gentian (Figure 12). 2*n* = 36. Meadows, rich, moist woods, wet, gravelly banks, roadsides. [*Gentiana quinquefolia* Linnaeus var. *quinquefolia*]

Gentianopsis crinita (Froelich) Ma—Fringed Gentian (Figure 12). 2*n* = 78. Meadows, brooksides, wet thickets, low woods, fields, roadsides, usually in more or less calcareous soil. [*Gentiana crinita* Froelich]

Halenia deflexa (Smith) Grisebach var. *deflexa*—Spurred Gentian (Figure 13). 2*n* = 22. Moist banks, wet woods, fields, roadsides.

Lomatogonium rotatum (Linnaeus) Fries var. *rotatum*—(Figure 13). 2*n* = 10, 16. Brackish shores of spray pools, rocky crevices next to tide pools.

Sabatia campanulata (Linnaeus) Torrey—Slender Marsh-pink (Figure 13). 2*n* = 34. Pond margins.

SABATIA CAMPESTRIS Nuttall—Texas-star (Figure 13). 2*n* = 26. Waste places, fields. From farther west and south.

Sabatia kennedyana Fernald—Plymouth Gentian (Figure 13). 2*n* = 40. Sandy and sphagnous shores of freshwater ponds.

Sabatia stellaris Pursh—Salt-marsh Pink (Figure 13). 2*n* = 36 + 0--4b. Salt or brackish marshes and meadows, brackish pond shores.

Sabatia hybrid

Sabatia campanulata (Linnaeus) Torrey × *S. kennedyana* Fernald (Figure 13).

SCHENKIA SPICATA (Linnaeus) G. Mansion—(Figure 13). 2*n* = 22. Salt marshes. From Mediterranean region, western Russia, southwestern Asia. [*CENTAURIUM SPICATUM* (Linnaeus) Fritsch]

HYPERICACEAE

Hypericum adpressum W.P.C. Barton (Figure 13). 2*n* = 18. Sandy or sphagnous pond shores and depressions.

Hypericum ascyron Linnaeus subsp. *pyramidatum* (Aiton) N. Robson—Great St. John's-wort (Figure 14). 2*n* = ? River thickets and meadows. [*H. pyramidatum* Aiton]

Hypericum boreale (Britton) E.P. Bicknell (Figure 14). 2*n* = 16. Swamps, bogs, meadows, shores, and other open, wet places. [*H. mutilum* Linnaeus subsp. *boreale* (Britton) J.M. Gillett]

Hypericum canadense Linnaeus—(Figure 14). 2*n* = 16. Bogs, shores, swamps, marshes, vernal pools, open places in moist sand.

HYPERICUM DENSIFLORUM Pursh—(Figure 14). 2*n* = 16, 18. Fields, roadsides. From farther south.

Hypericum ellipticum Hooker (Figure 14). 2*n* = 18. Sandy or gravelly shores, meadows, marshes, swamps and other wet places.

HYPERICUM FRONDOSUM Michaux (Figure 14). 2*n* = 18. Fields, roadsides. From farther south.

Hypericum gentianoides (Linnaeus) Britton, Sterns & Poggenburg Pineweed (Figure 14). 2*n* = 24. Sandy, open soil, railroads, roadsides, fields, waste places.

Hypericum hypericoides (Linnaeus) Crantz subsp. *multicaule* (Michaux *ex* Willdenow) N. Robson St. Andrew's Cross (Figure 14). 2*n* = 18. Dry sand plains. [*H. stragulum* W.P. Adams & N. Robson; *Ascyrum hypericoides* Linnaeus var. *multicaule* (Michaux *ex* Willdenow) Fernald]

Hypericum majus (A. Gray) Britton (Figure 14). 2*n* = 16. Damp fields, shores, wet roadsides, other open, wet places.

Hypericum mutilum Linnaeus subsp. *mutilum* (Figure 15). 2*n* = 16. Swamps, bogs, meadows, shores, and other open, wet places. [*H. mutilum* var. *parviflorum* Fernald]

HYPERICUM PERFORATUM Linnaeus subsp. *PERFORATUM* Common St. John's-wort (Figure 15). 2*n* = 16, 32, 48. Dry, sandy, fields, roadsides, riverbanks, meadows, railroads, waste places. From Eurasia, northern Africa.

HYPERICUM PROLIFICUM Linnaeus Shrubby St. John's-wort (Figure 15). 2*n* = 18. Sandy fields, roadsides. From farther south and west. [*H. SPATHULATUM* (Spach) Steudel]

Hypericum punctatum Lamarck Spotted St. John's-wort (Figure 15). 2*n* = 16. River thickets, meadows, swamps, woodlands, fields, openings, railroads, roadsides.

Hypericum hybrids

Hypericum canadense Linnaeus × *H. majus* (A. Gray) Britton (Figure 15).

Hypericum canadense Linnaeus × *H. mutilum* Linnaeus subsp. *mutilum* (Figure 15).

Hypericum × *dissimulatum* E.P. Bicknell (*pro species*) (Figure 15). [*H. canadense* Linnaeus × *H. mutilum* Linnaeus subsp. *boreale* (Britton) J.M. Gillett]

Hypericum majus (A. Gray) Britton × *H. mutilum* Linnaeus subsp. *mutilum* (Figure 15).

Triadenum fraseri (Spach) Gleason (Figure 15). 2*n* = 38. Bogs, marshes, swamps, shores. [*Hypericum fraseri* (Spach) Steudel; *H. virginicum* Linnaeus var. *fraseri* (Spach) Fernald]

Triadenum virginicum (Linnaeus) Rafinesque—Marsh St. John's-wort (Figure 16). 2*n* = 38. Bogs, marshes, swamps, shores. [*H. virginicum* Linnaeus]

MALVACEAE

ABELMOSCHUS ESCULENTUS (Linnaeus) Moench Okra (Figure 16). 2*n* = 120. Waste places. From southern Asia or western Africa.

ABUTILON PICTUM (Gillies *ex* Hooker & Arnott) Walpers—Painted Indian-mallow (Figure 16). 2*n* = 16. Railroads. From South America. [*A. STRIATUM* G.F. Dickson *ex* Lindley]

ABUTILON THEOPHRASTI Medikus—Velvet-leaf (Figure 16). 2*n* = 42. Waste places, fields, roadsides. From Eurasia, northern Africa.

ALCEA ROSEA Linnaeus—Hollyhock (Figure 16). 2*n* = 42, 84. Waste places, roadsides, railroads, rocky beaches. From southwestern China. [*ALTHAEA ROSEA* (Linnaeus) Cavanilles]

ALTHAEA OFFICINALIS Linnaeus—Marsh-mallow (Figure 16). 2*n* = 42. Salt or brackish marsh margins, waste places. From Eurasia, northern Africa.

ANODA CRISTATA (Linnaeus) Schlechtendal—Violettas (Figure 16). 2*n* = 30, 60. Wool waste. From farther west, Mexico, Central America, South America, Caribbean.

GOSSYPIUM HIRSUTUM Linnaeus—Upland Cotton (Figure 16). 2*n* = 26, 39, 52. Waste places. From Mexico, Central America. [*G. HERBACEUM* misapplied]

Hibiscus moscheutos Linnaeus subsp. *moscheutos*—Swamp Rose-mallow (Figure 16). 2*n* = 38. Marshy river borders, brackish, freshwater, and salt marshes. [*H. palustris* Linnaeus]

HIBISCUS SYRIACUS Linnaeus—Rose-of-Sharon (Figure 17). 2*n* = 40, 80, 88, 90. Woodland margins, roadsides, thickets. From China, Taiwan.

HIBISCUS TRIONUM Linnaeus—Flower-of-an-hour (Figure 17). 2*n* = 28, 56. Railroads, roadsides, waste places. From Eurasia, Africa.

LAVATERA TRIMESTRIS Linnaeus—Annual Mallow (Figure 17). 2*n* = 14. Waste places. From Mediterranean region.

MALVA ALCEA Linnaeus—Vervain Mallow (Figure 17). 2*n* = 84. Roadsides, waste places. From Europe, Turkey.

MALVA MOSCHATA Linnaeus—Musk Mallow (Figure 17). 2*n* = 42. Roadsides, fields, waste places. From Europe, Turkey.

MALVA NEGLECTA Wallroth—Common Mallow (Figure 17). 2*n* = 42. Waste places, roadsides, fields. From Eurasia, northern Africa. [*M. ROTUNDIFOLIA* Linnaeus - rejected name]

MALVA PARVIFLORA Linnaeus—Cheeseweed (Figure 17). 2*n* = 42. Waste places. From Eurasia, northern Africa.

MALVA PUSILLA Smith—Dwarf Mallow (Figure 17). 2*n* = 42. Fields, waste places, roadsides. From Eurasia. [*M. ROTUNDIFOLIA* Linnaeus - rejected name]

MALVA SYLVESTRIS Linnaeus—High Mallow (Figure 17). 2*n* = 42. Waste places, roadsides. From Eurasia, northern Africa. [*M. SYLVESTRIS* var. *MAURITANIA* (Linnaeus) Boissier]

MALVA VERTICILLATA Linnaeus—Chinese Mallow (Figure 18). $2n$ = 84, 112. Waste places, roadsides. From China. [*M. VERTICILLATA* var. *CRISPA* Linnaeus; *M. CRISPA* (Linnaeus) Linnaeus]

MALVASTRUM COROMANDELIANUM (Linnaeus) Garcke—(Figure 18). $2n$ = 24. Wool waste. From Texas, Mexico, Central America, Caribbean, South America.

NAPAEA DIOICA Linnaeus—Glade-mallow (Figure 18). $2n$ = ca. 30. Roadsides, railroads. From farther west and south.

PSEUDABUTILON STUCKERTII R.E. Fries—(Figure 18). $2n$ = ? Wool waste. From South America. [*WISSADULA CALLIMORPHA* (Hochreutiner) Hassler var. *FRIESII* Hassler]

SIDA HERMPHRODITA (Linnaeus) Rusby—Virginia Mallow (Figure 18). $2n$ = 28. Waste places, fields. From farther south.

SIDA SPINOSA Linnaeus—Prickly Mallow (Figure 18). $2n$ = 14, 28. Waste places, wool waste, fields. From tropical Americas, tropical Africa, tropical Asia.

SPHAERALCEA MENDOCINA (Philippi) K. Schumann—(Figure 18). $2n$ = ? Wool waste. From South America.

Tilia americana Linnaeus var. *americana*—Basswood (Figure 18). $2n$ = 82. Rich woods. [*T. glabra* Ventenat - illegitimate name; *T. neglecta* Spach]

TILIA AMERICANA Linnaeus var. *CAROLINIANA* (Miller) Castiglioni (Figure 18). $2n$ = 82. Wooded hillside. From farther south. [*T. PUBESCENS* Aiton]

TILIA AMERICANA Linnaeus var. *HETEROPHYLLA* (Ventenat) Loudon—White Basswood (Figure 19). $2n$ = 82. Roadsides, dry, open soil near river. From farther south and west. [*T. HETEROPHYLLA* Ventenat]

TILIA CORDATA Miller (Figure 19). $2n$ = 82. Roadsides, railroads, hedgerows, woodland margins, floodplain woods. From Eurasia.

TILIA PLATYPHYLLOS Scopoli—Large-leaved Linden (Figure 19). $2n$ = 82. Roadsides. From Europe, Turkey.

—*Tilia* hybrid—

TILIA × *EUROPAEA* Linnaeus (*pro species*)—(Figure 19). [*T. CORDATA* Miller × *T. PLATYPHYLLOS* Scopoli; *T.* × *VULGARIS* Hayne (*pro species*)]

PODOSTEMACEAE

Podostemum ceratophyllum Michaux—Threadfoot (Figure 19). $2n$ = ? On rocks in rapid current of streams.

SOLANACEAE

CAPSICUM ANNUUM Linnaeus var. *GLABRIUSCULUM* (Dunal) Heiser & Pickersgill—Bird Pepper (Figure 19). 2*n* = 24, 48. Waste places, railroads. From farther south and west, Mexico, Central America, Caribbean, South America.

DATURA INOXIA Miller—Downy Thorn-apple (Figure 19). 2*n* = 24. Waste places, roadsides, railroads. From Texas, Mexico, Central America, Caribbean, South America.

DATURA STRAMONIUM Linnaeus—Jimsonweed (Figure 19). 2*n* = 24. Waste places, roadsides, fields. From Mexico and perhaps elsewhere in the Americas. [*D. STRAMONIUM* var. *TATULA* (Linnaeus) Torrey]

DATURA WRIGHTII Regel—Sacred Thorn-apple (Figure 19). 2*n* = 24. Waste places. From farther west.

HYOSCYAMUS NIGER Linnaeus—Black Henbane (Figure 20). 2*n* = 34. Roadsides, waste places, wool waste. From Eurasia, northern Africa.

Leucophysalis grandiflora (Hooker) Rydberg—White Gound-cherry (Figure 20). 2*n* = 48. Lake shores. [*Chamaesaracha grandiflora* (Hooker) Fernald; *Physalis grandiflora* Hooker]

LYCIUM BARBARUM Linnaeus—Common Matrimony-vine (Figure 20). 2*n* = 24, 48. Waste places, roadsides, fields, waste places, thickets. From China. [*L. HALIMIFOLIUM* Miller]

LYCIUM CHINENSE Miller var. *CHINENSE*—Chinese Matrimony-vine (Figure 20). 2*n* = 24, 36, 48. Waste places, roadsides. From eastern Asia.

NICANDRA PHYSALODES (Linnaeus) Gaertner—Apple-of-Peru (Figure 20). 2*n* = 20. Waste places, roadsides. From Peru.

NICOTIANA ALATA Link & Otto—Jasmine Tobacco (Figure 20). 2*n* = 18. Waste places, roadsides. From South America. [*N. AFFINIS* T. Moore]

NICOTIANA LANGSDORFII Weinmann—(Figure 20). 2*n* = 18, 36. Waste places. From South America.

NICOTIANA LONGIFLORA Cavanilles—(Figure 20). 2*n* = 20. Waste places. From South America.

NICOTIANA QUADRIVALVIS Pursh var. *BIGELOVII* (Torrey) DeWolf—(Figure 20). 2*n* = ? Wool waste. From farther west.

NICOTIANA RUSTICA Linnaeus—Aztec Tobacco (Figure 21). 2*n* = 48. Fields, roadsides, waste places. From western South America.

NICOTIANA TABACUM Linnaeus—Common Tobacco (Figure 21). 2*n* = 24, 48. Fields, waste places. From tropical America.

PETUNIA AXILLARIS (Lamarck) Britton, Sterns & Poggenburg—White Moon Petunia (Figure 21). 2*n* = 14, 21, 56. Roadsides, railroads, waste places. From South America.

PETUNIA INTEGRIFOLIA (Hooker) Schinz & Thellung — Violet Petunia (Figure 21). 2*n* = 14. Waste places. From South America. [*P. VIOLACEA* Lindley]

—*Petunia* hybrid—

PETUNIA × *ATKINSIANA* (Sweet) D. Don *ex* W.H. Baxter (*pro species*) — (Figure 21). [*P. AXILLARIS* (Lamarck) Britton, Sterns & Poggenburg × *P. INTEGRIFOLIA* (Hooker) Schinz & Thellung; *P.* × *HYBRIDA* misapplied]

PHYSALIS ALKEKENGI Linnaeus — Chinese-lantern (Figure 21). 2*n* = 24. Waste places, roadsides, thickets, railroads. From Eurasia. Note: This species will placed in the genus *ALKEKENGI* in the forthcoming Flora of North America treatment, but the specific epithet is still undetermined.

PHYSALIS ANGULATA Linnaeus — (Figure 21). 2*n* = 24, 48. Waste places. From farther west and south.

Physalis grisea (Waterfall) M. Martínez — Strawberry-tomato (Figure 21). 2*n* = 24. Waste places, roadsides, sandy fields and bluffs. [*P. pruinosa* misapplied; *P. pubescens* Linnaeus var. *grisea* Waterfall]

Physalis heterophylla Nees — Clammy Ground-cherry (Figure 21). 2*n* = 24. Fields, dry, open woods, clearings, roadsides, waste places. [*P. heterophylla* var. *ambigua* (A. Gray) Rydberg; *P. nyctaginea* Dunal]

PHYSALIS IXOCARPA Brotero *ex* Hornemann var. *IMMACULATA* (Waterfall) Kartesz & Gandhi (Figure 22). 2*n* = ? Waste places. From ? [*P. PHILADELPHICA* Lamarck var. *IMMACULATA* Waterfall]

Physalis longifolia Nuttall var. *subglabrata* (Mackenzie & Bush) Cronquist — (Figure 22). 2*n* = 24. Waste places, roadsides, fields. [*P. subglabrata* Mackenzie & Bush; *P. virginiana* Miller var. *subglabrata* (Mackenzie & Bush) Waterfall]

Physalis virginiana Miller — (Figure 22). 2*n* = 24. Waste places, fields, dry, sandy or rocky woodlands, woodland margins, clearings.

SALPIGLOSSIS SINUATA Ruiz & Pavón — Painted-tongue (Figure 22). 2*n* = 44. Waste places. From Chile.

SOLANUM CAPSICOIDES Allioni — Cockroach-berry (Figure 22). 2*n* = 24. Waste places. From South America. [*S. SPHAEROCARPUM* Moricand]

SOLANUM CAROLINENSE Linnaeus — Horse-nettle (Figure 22). 2*n* = 24. Dry fields, openings, roadsides, railroads, waste places, especially in sandy soil. From farther south.

SOLANUM CITRULLIFOLIUM A. Braun var. *CITRULLIFOLIUM* — (Figure 22). 2*n* = 24. Waste places. From Texas, Mexico.

SOLANUM DULCAMARA Linnaeus—Climbing Nightshade (Figure 22). 2*n* = 24. Moist thickets, clearings, streambanks, roadsides, waste places. From Eurasia, northern Africa. [*S. DULCAMARA* var. *VILLOSISSIMUM* Desvaux]

SOLANUM LYCOPERSICUM Linnaeus—Garden Tomato (Figure 22). 2*n* = 24, 48. Waste places, roadsides, railroads, shores, streambanks. From Mexico. [*LYCOPERSICON ESCULENTUM* Miller]

SOLANUM MELONGENA Linnaeus—Eggplant (Figure 23). 2*n* = 24, 48. Waste places. From Africa.

SOLANUM NIGRUM Linnaeus—European Black Nightshade (Figure 23). 2*n* = 24, 36, 48, 72. Sea beaches, waste places. From Eurasia, northern Africa.

SOLANUM PHYSALIFOLIUM Rusby—(Figure 23). 2*n* = 16. Waste places, field and woodland margins, roadsides. From South America. [*S. SARACHOIDES* misapplied]

SOLANUM PSEUDOCAPSICUM Linnaeus—Jerusalem-cherry (Figure 23). 2*n* = 24. Waste places. From Mexico, Central America, Caribbean, South America.

Solanum ptychanthum Dunal—Eastern Black Nightshade (Figure 23). 2*n* = 24. Woodlands, shores, thickets, waste places, usually moist soil. [*S. americanum* misapplied; *S. nigrum* misapplied]

SOLANUM ROSTRATUM Dunal—Buffalo-bur (Figure 23). 2*n* = 24. Waste places, railroads, shores. From farther west. [*S. CORNUTUM* misapplied]

SOLANUM SISYMBRIIFOLIUM Lamarck—Sticky Nightshade (Figure 23). 2*n* = 24. Waste places. From South America.

SOLANUM TRIFLORUM Nuttall—(Figure 23). 2*n* = 24. Waste places. From farther west.

SOLANUM TUBEROSUM Linnaeus—Potato (Figure 23). 2*n* = 24, 36, 48. Waste places, roadsides, railroads, fields. From western South America.

SOLANUM VILLOSUM Miller—(Figure 24). 2*n* = 48. Waste places. From southern Europe.

TAMARICACEAE

TAMARIX PARVIFLORA de Candolle—(Figure 24). 2*n* = ? Waste places, sandy roadsides. From southeastern Europe, southwestern Asia.

TAMARIX RAMOSISSIMA Ledebour—Pink Tamarisk (Figure 24). 2*n* = 22, 24. Dry gravel fill over salt marsh. From eastern Europe, Asia. [*T. PENTANDRA* Pallas - illegitimate name]

THYMELAEACEAE

DAPHNE CNEORUM Linnaeus—Rose Daphne (Figure 24). 2*n* = 18. Dry, woodland roadside near cellar hole. From Europe.

DAPHNE MEZEREUM Linnaeus—Mezereon (Figure 24). 2*n* = 18. Roadsides, thickets, calcareous rocky knolls and hillsides, dry woods, fields. From Eurasia.

Dirca palustris Linnaeus—Leatherwood (Figure 24). 2*n* = ? Damp, rich, deciduous or mixed woods.

VIOLACEAE

Hybanthus concolor (T.F. Forster) Sprengel—Green Violet (Figure 24). 2*n* = 48. Shaded, calcareous talus.

Viola adunca Smith var. *adunca*—(Figure 24). 2*n* = 20, 30, 40. Dry, open woods, fields, rocky slopes, roadsides, railroads, often in dry, sandy soil.

Viola affinis Leconte—(Figure 24). 2*n* = 54. Rich, moist woods, moist fields, meadows, damp thickets, streambanks, shores. [*V. venustula* Greene]

VIOLA ARVENSIS Murray—European Field Pansy (Figure 25). 2*n* = 34. Fields, waste places, roadsides. From Eurasia, northern Africa.

Viola blanda Willdenow—Sweet White Violet (Figure 25). 2*n* = 44, 48. Rich, moist woods, swamps. [*V. blanda* var. *palustriformis* A. Gray; *V. incognita* Brainerd var. *incognita*; *V. incognita* var. *forbesii* Brainerd]

Viola brittoniana Pollard—Coastal Violet (Figure 25). 2*n* = 54. Sandy soil, often near streams, meadows or coastal marshes. [*V. brittoniana* var. *pectinata* (E.P. Bicknell) Alexander; *V. pectinata* E.P. Bicknell; *V. pedatifida* G. Don var. *brittoniana* (Pollard) R.J. Little & L.E. McKinney]

Viola canadensis Linnaeus var. *canadensis*—Tall White Violet (Figure 25). 2*n* = 24. Rich, moist, deciduous woods, often calcareous or rocky.

Viola cucullata Aiton—Marsh Blue Violet (Figure 25). 2*n* = 54. Swamps, wet meadows, rich woods, streamsides.

Viola labradorica Schrank—American Dog Violet (Figure 25). 2*n* = 20. Rich woods, woodland clearings, meadows, swamps, bogs, alluvial thickets, streambanks, ledges, talus. [*V. adunca* Leconte var. *minor* (Hooker) Fernald; *V. conspersa* Reichenbach]

Viola lanceolata Linnaeus—Lance-leaved Violet (Figure 25). 2*n* = 24. Shores, swamps, meadows, in damp or wet, sandy or sphagnous, open or slightly shaded soil.

Viola mackloskeyi F.E. Lloyd—Northern White Violet (Figure 25). 2*n* = 24. Swamps, wet or springy woods, meadows, shores, alpine areas, often among mosses. [*V. pallens* (Banks *ex* Gingins) Brainerd]

Viola nephrophylla Greene—Northern Bog Violet (Figure 25). 2*n* = 24. Rocky or gravelly river shores, often calcareous, bogs, meadows, rich, moist woods.

Viola novae-angliae House—(Figure 26). 2*n* = ? Rocky, gravelly or sandy river shores. [*V. sororia* Willdenow var. *grisea* (Fernald) L.E. McKinney]

VIOLA ODORATA Linnaeus—English Violet (Figure 26). 2*n* = 20. Fields, waste places, roadsides. From Eurasia, northern Africa.

Viola palmata Linnaeus var. *palmata*—Wood Violet (Figure 26). 2*n* = 54. Wooded hillsides, rich, deciduous woods, calcareous ledges. [*V. palmata* var. *triloba* (Schweinitz) Gingins *ex* de Candolle; *V. triloba* Schweinitz var. *triloba*; *V. triloba* var. *dilatata* (Elliott) Brainerd]

Viola palustris Linnaeus—Alpine Marsh Violet (Figure 26). 2*n* = 48. Alpine and subalpine brooksides and rocky slopes.

Viola pedata Linnaeus var. *pedata*—Bird-foot Violet (Figure 26). 2*n* = 54, 56. Dry, open, sandy soil. [*V. pedata* var. *lineariloba* de Candolle]

Viola primulifolia Linnaeus var. *primulifolia*—(Figure 26). 2*n* = 24. Meadows, swamps, shores, thin, moist woods. [*V. primulifolia* var. *acuta* (Bigelow) Torrey & A. Gray]

Viola pubescens Aiton var. *pubescens*—Downy Yellow Violet (Figure 26). 2*n* = 12. Rich, often dry, usually deciduous woods. [*V. pubescens* var. *eriocarpa* Nuttall; *V. pubescens* var. *peckii* House]

Viola pubescens Aiton var. *scabriuscula* Torrey & A. Gray—Smooth Yellow Violet (Figure 26). 2*n* = 12. Rich, often moist woods. [*V. pubescens* var. *leiocarpa* (Fernald & Wiegand) B. Boivin; *V. pensylvanica* Michaux var. *pensylvanica*; *V. pensylvanica* var. *leiocarpa* (Fernald & Wiegand) Fernald]

Viola renifolia A. Gray—(Figure 26). 2*n* = 24. Rich, cool, often moist, woods, swamps, damp thickets. [*V. renifolia* var. *brainerdii* (Greene) Fernald]

Viola rostrata Pursh—Long-spurred Violet (Figure 27). 2*n* = 20. Rich, often calcareous, woods.

Viola rotundifolia Michaux—Early Yellow Violet (Figure 27). 2*n* = 12. Rich woods.

Viola sagittata Aiton var. *sagittata*—Arrow-leaved Violet (Figure 27). 2*n* = 54. Sterile meadows, dry, sandy fields and open woods, clearings, roadsides. [*V. emarginata* (Nuttall) Leconte]

Viola sagittata Aiton var. *ovata* (Nuttall) Torrey & A. Gray—(Figure 27). 2*n* = 54. Dry, sterile fields, woods, roadsides and clearings, railroads. [*V. fimbriatula* Smith]

Viola selkirkii Pursh *ex* Goldie—Great-spurred Violet (Figure 27). 2*n* = 24. Rich woods, rocky, shady slopes.

Viola sororia Willdenow—Common Blue Violet (Figure 27). 2*n* = 54. Rich woods, thickets, streambanks, fields, clearings, roadsides, waste places. [*V. latiuscula* Greene; *V. septentrionalis* Greene]

Viola striata Aiton—Cream Violet (Figure 27). 2*n* = 20. Brookside in woodland.

Viola subsinuata (Greene) Greene—(Figure 27). $2n = 54$. Rich, often rocky, woods, calcareous ledges, dry hillsides, roadsides.

VIOLA TRICOLOR Linnaeus var. *TRICOLOR*—Heart's-ease (Figure 27). $2n = 26$. Field, waste places, gravel banks, roadsides, open woods. From Eurasia.

Viola hybrids

Viola adunca Smith var. *adunca* × *V. labradorica* Schrank (Figure 28).

Viola affinis Leconte × *V. nephrophylla* Greene—(Figure 28). [*Viola* × *subaffinis* House]

Viola affinis Leconte × *V. palmata* Linnaeus var. *palmata*—(Figure 28).

Viola affinis Leconte × *V. sagittata* Aiton var. *sagittata*—(Figure 28).

Viola affinis Leconte × *sagittata* Aiton var. *ovata* (Nuttall) Torrey & A. Gray (Figure 28). [*Viola* × *hollickii* House (*pro species*)]

Viola affinis Leconte × *V. sororia* Willdenow (Figure 28). [*V.* × *champlainensis* House; *Viola* × *filicetorum* Greene (*pro species*)]

Viola brittoniana Pollard × *V. cucullata* Aiton (Figure 28). [*Viola* × *notabilis* E.P. Bicknell (*pro species*)]

Viola brittoniana Pollard × *V. lanceolata* Linnaeus (Figure 28).

Viola brittoniana Pollard × *V. sagittata* Aiton var. *sagittata* (Figure 28).

Viola brittoniana Pollard × *V. sagittata* Aiton var. *ovata* (Nuttall) Torrey & A. Gray—(Figure 29). [*Viola* × *mulfordae* Pollard (*pro species*)]

Viola brittoniana Pollard × *V. sororia* Willdenow (Figure 29). [*Viola* × *insolita* House]

Viola cucullata Aiton × *V. nephrophylla* Greene—(Figure 29). [*Viola* × *insessa* House]

Viola cucullata Aiton × *V. palmata* Linnaeus var. *palmata* (Figure 29). [*Viola* × *greenmanii* House; *V.* × *ryoniae* House]

Viola cucullata Aiton × *V. sagittata* Aiton var. *sagittata*—(Figure 29). [*Viola* × *festata* House] Note: Since one of the parent species, *V. sagittata* var. *sagittata*, is limited primarily to southern New England, the specimens from northern New England identified as this hybrid are more likely to be *V.* × *porteriana* Pollard.

Viola cucullata Aiton × *V. sagittata* Aiton var. *ovata* (Nuttall) Torrey & A. Gray—(Figure 29). [*Viola* × *porteriana* Pollard (*pro species*)]

Viola cucullata Aiton × *V. sororia* Willdenow—(Figure 29). [*Viola* × *bissellii* House; ? *V. papilionacea* Pursh]

Viola labradorica Schrank × *V. rostrata* Pursh (Figure 29). [*Viola* × *malteana* House]

Viola labradorica Schrank × *V. striata* Aiton (Figure 29). [*Viola* × *eclipes* H.E. Ballard]

Viola lanceolata Linnaeus × *V. primulifolia* Linnaeus var. *primulifolia* (Figure 30). [*Viola* × *modesta* House, illegitimate name]

Viola palmata Linnaeus var. *palmata* × *V. sagittata* Aiton var. *sagittata* (Figure 30). [*Viola* × *mistura* House]

Viola palmata Linnaeus var. *palmata* × *V. sagittata* Aiton var. *ovata* (Nuttall) Torrey & A. Gray (Figure 30). [*V.* × *convicta* House; *Viola* × *robinsoniana* House]

Viola palmata Linnaeus var. *palmata* × *V. sororia* Willdenow (Figure 30). [*Viola* × *populifolia* Greene (*pro species*)]

Viola sagittata Aiton var. *sagittata* × *V. sororia* Willdenow (Figure 30). [*Viola* × *conjugens* Greene (*pro species*)]

Viola sagittata Aiton var. *ovata* (Nuttall) Torrey & A. Gray × *V. sororia* Willdenow (Figure 30). [*Viola* × *fernaldii* House]

ACKNOWLEDGMENTS

We thank the curators and directors of the herbaria of the New England Botanical Club, the Harvard University Herbaria, the University of Massachusetts, and the University of Vermont for allowing access to their collections. For the University of Maine, University of Connecticut and Yale University herbaria we used their exceptional online databases of specimens. We are grateful also to Karen Searcy for facilitating access to the herbarium and to the notebooks of Harry E. Ahles at the University of Massachusetts (Amherst). Dr. Searcy and Roberta Lombardi kindly answered our requests for information after our visit. James Hinds generously checked information on voucher specimens at the University of Maine (Orono). The following persons also checked certain records for us at their respective institutions: Janet Sullivan, Patrick Sweeney, Craig D. Layne and Elizabeth Allen. In addition Dr. Sullivan generously shared portions of her Flora of North America draft treatment of *Physalis*. John T. Kartesz and Misako Nishino very kindly provided the latest draft version of the Floristic Synthesis of North America, which was consulted for reports of occurrence and the sources of such reports. We thank Arthur Haines for responding to a query about *Viola* and Art Gilman for responding to a query about *Leucophysalis*. Erika Sonder kindly assisted with reviewing specimens at the Harvard University Herbaria. We thank Kanchi Gandhi for significant nomenclatural advice.

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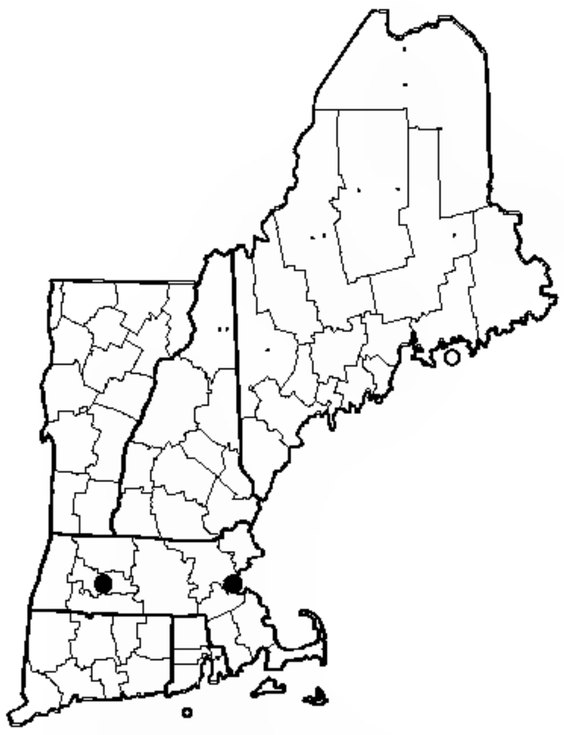
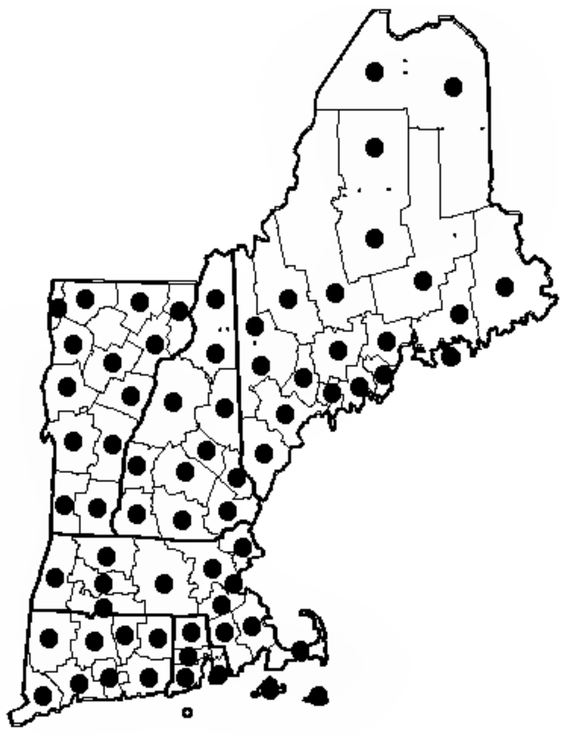
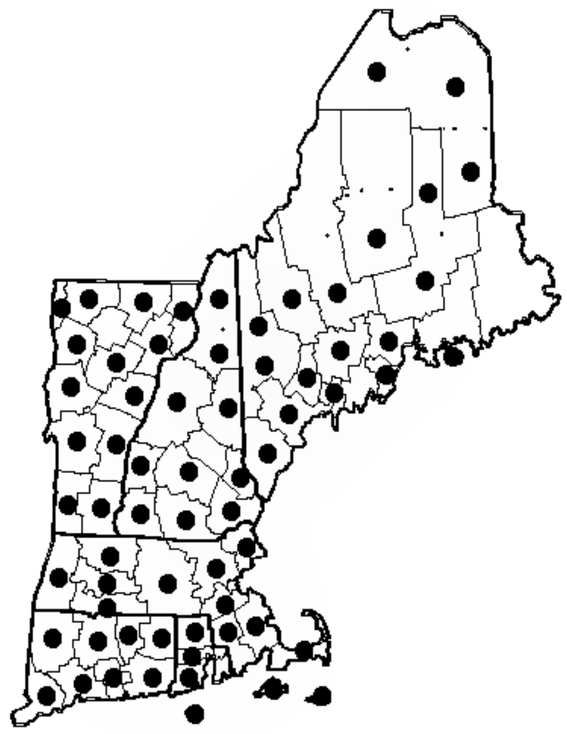
Figure 1 Key map for counties of the New England states (and Mt Desert Island, Maine, Block Island, Rhode Island, arbitrary divisions of larger Maine counties and of Coos County, New Hampshire)



AMSONIA TABERNAEMONTANA
var *TABERNAEMONTANA*



Apocynum androsaemifolium



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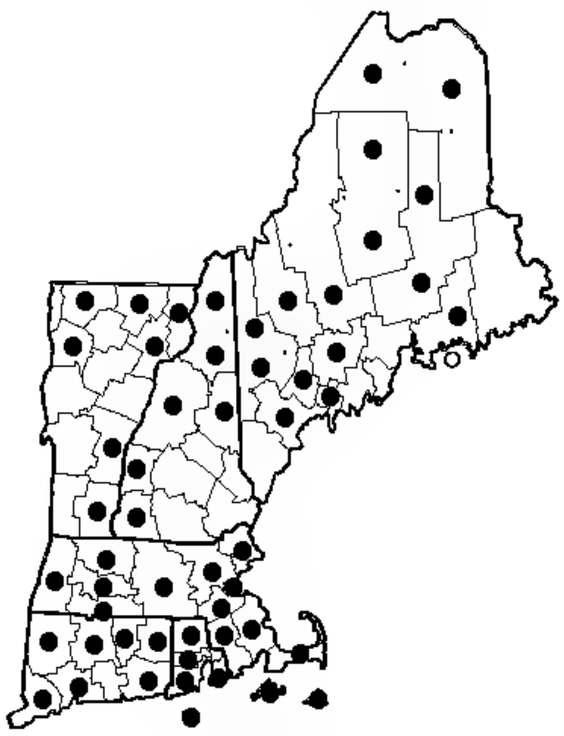
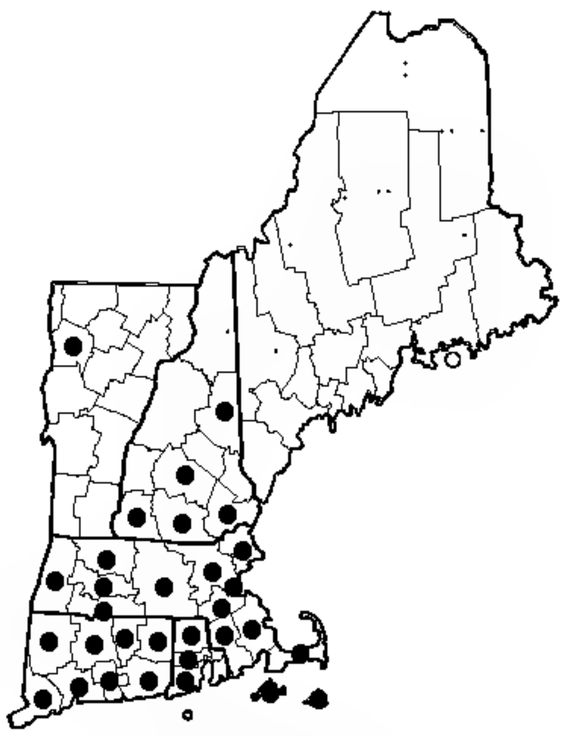
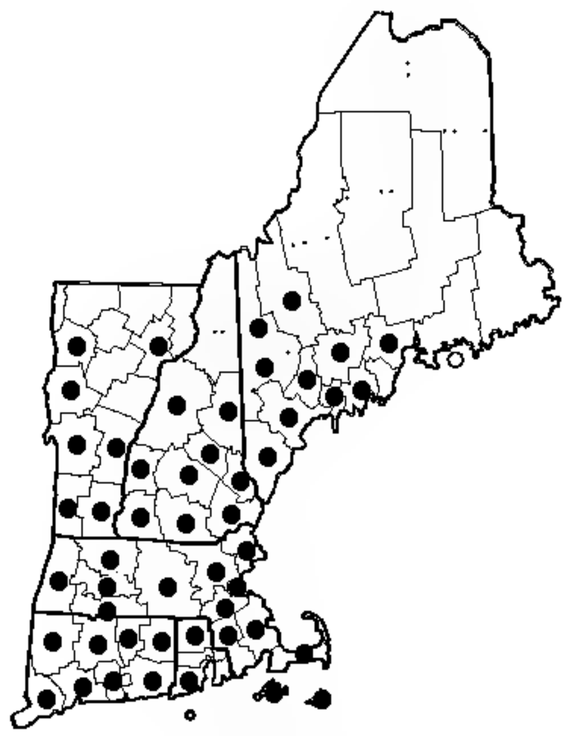


Apocynum X floribundum



Asclepias amplexicaulis



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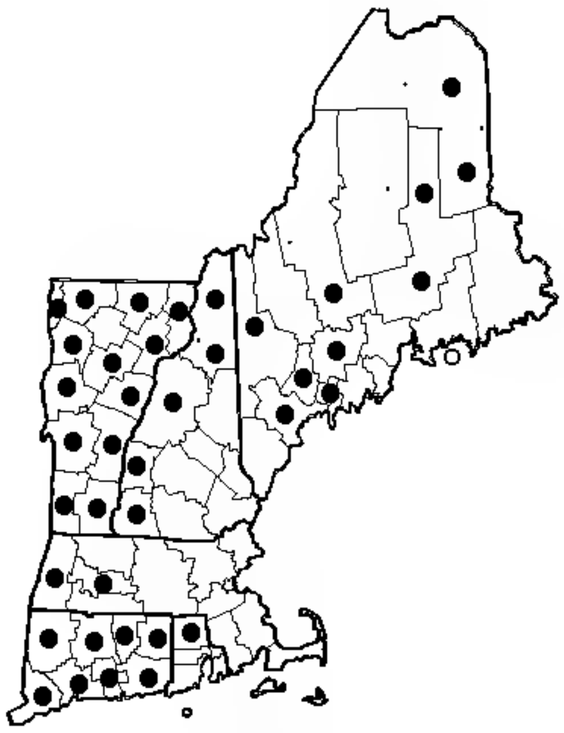
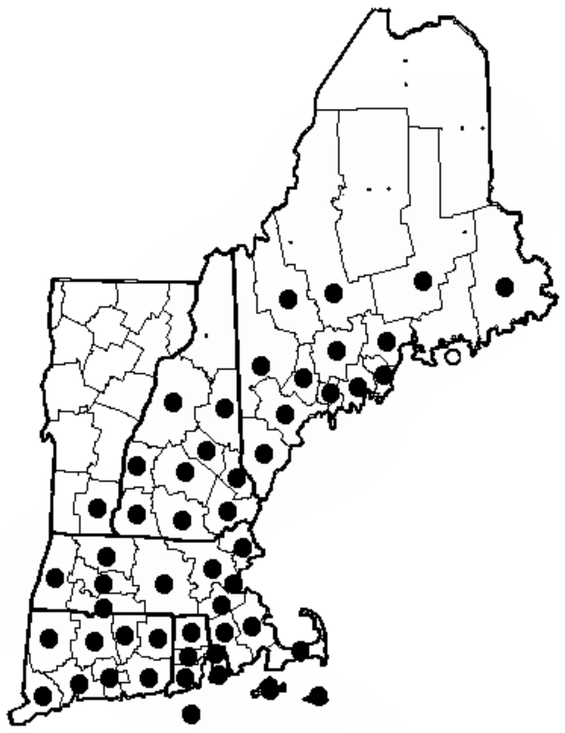


Asclepias incarnata
subsp. *incarnata*



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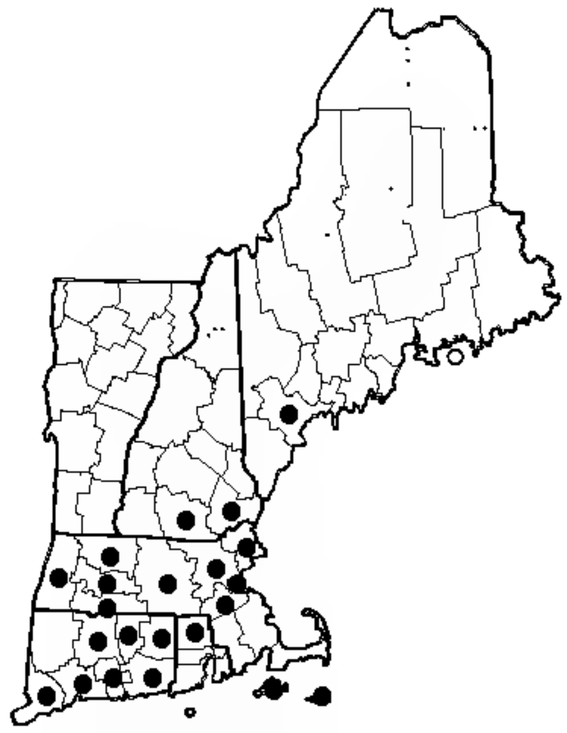
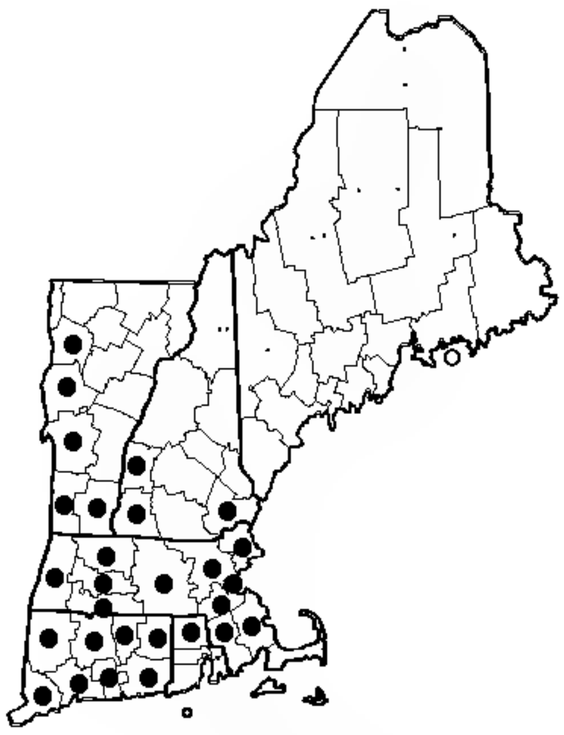


Asclepias purpurascens

Figure 2 Distribution maps



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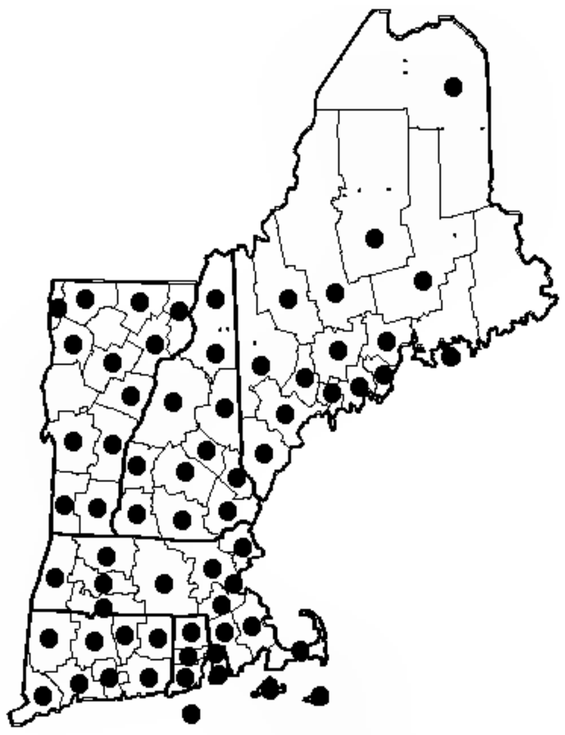

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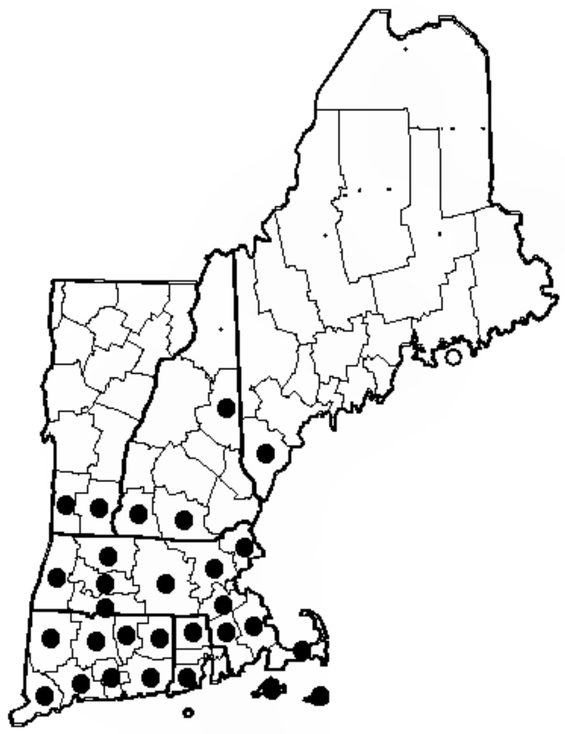

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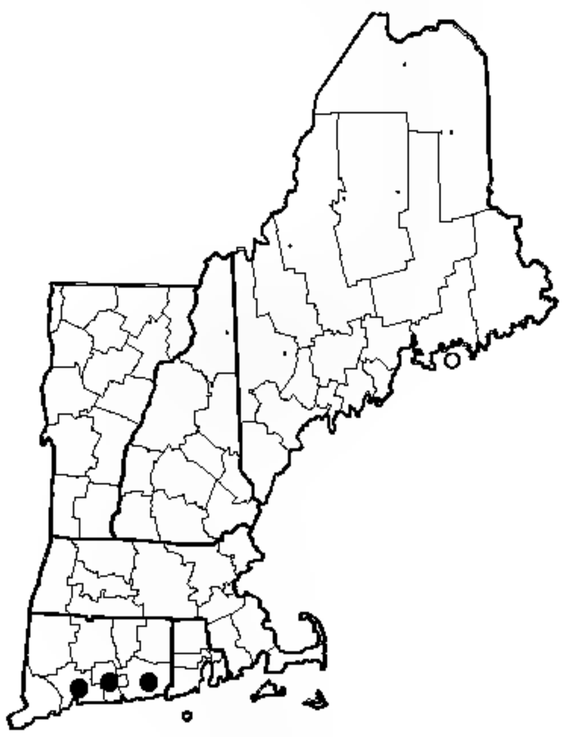
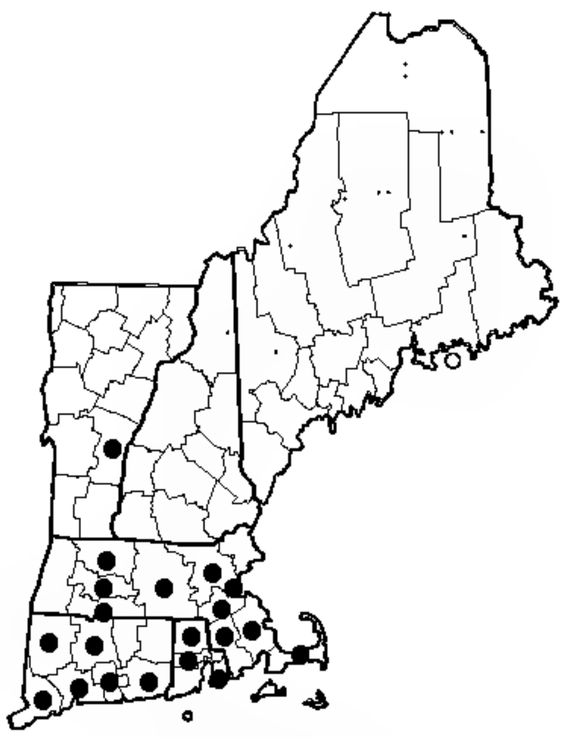


Asclepias variegata



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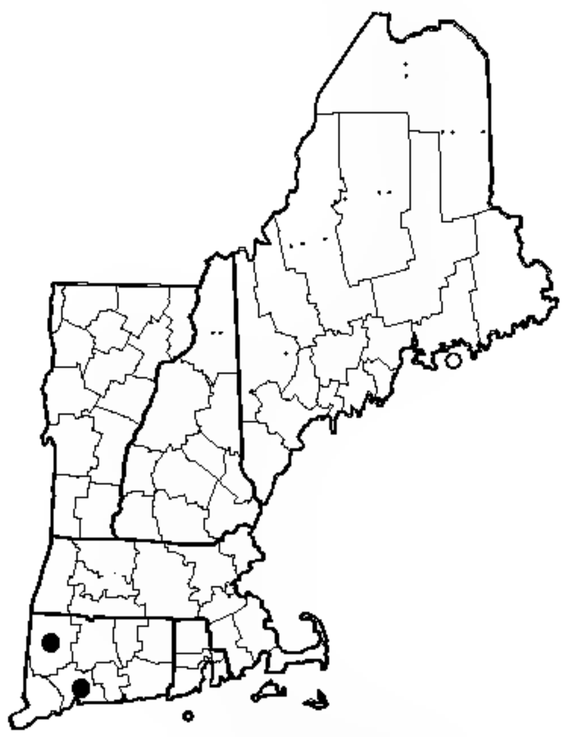
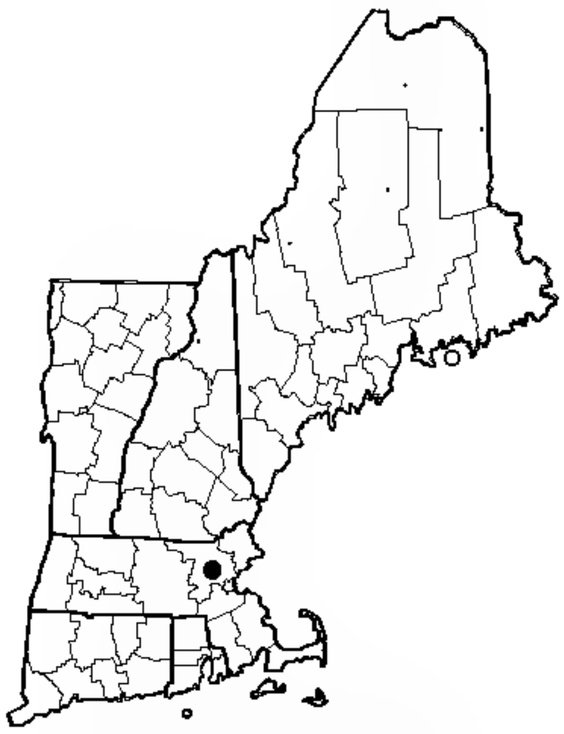
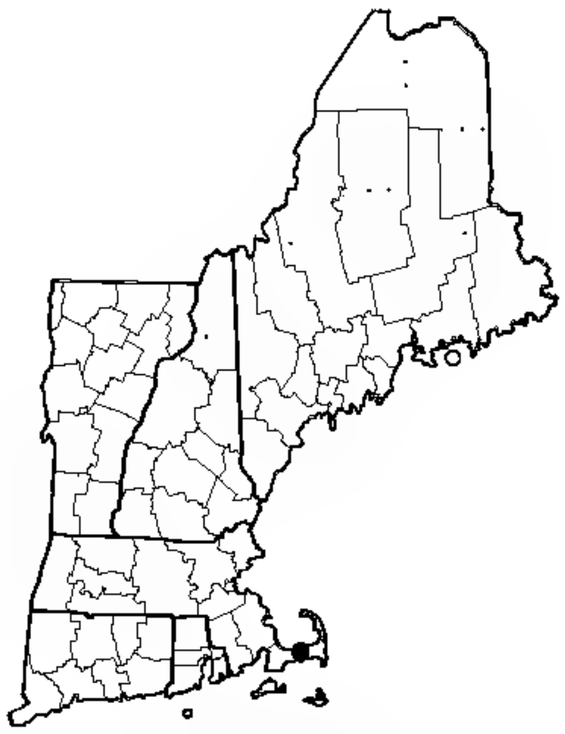


Asclepias viridiflora



Asclepias amplexicaulis
X *A. exaltata*



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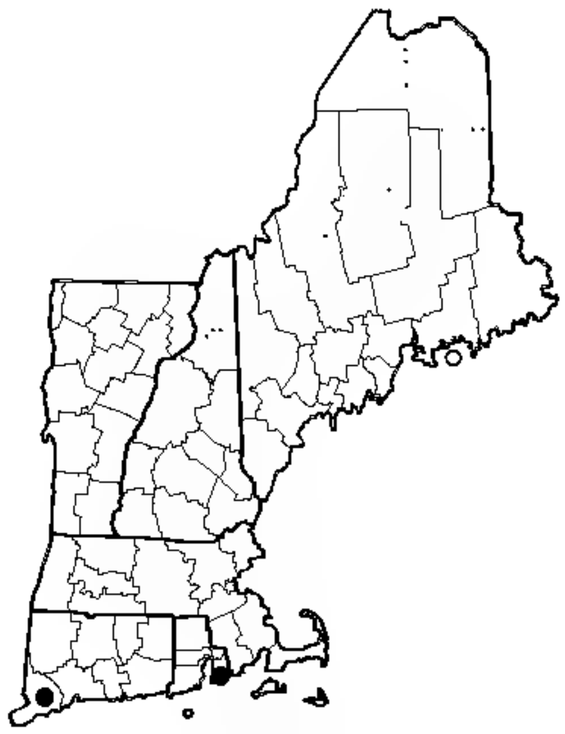
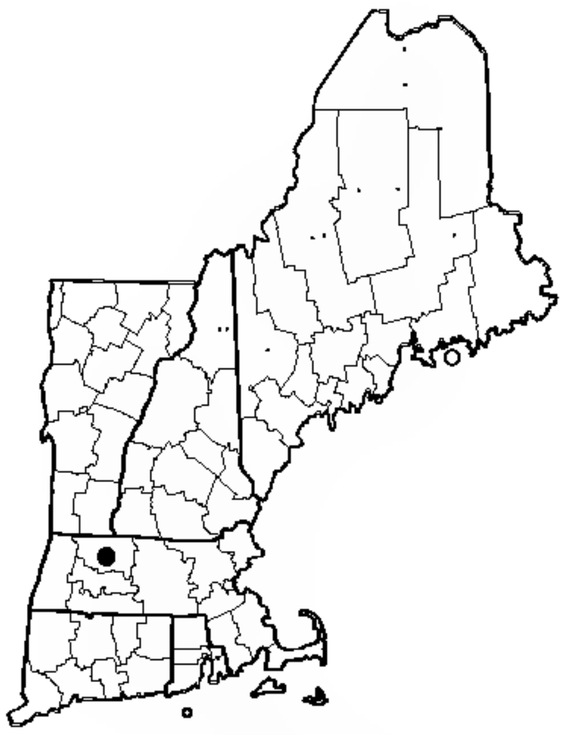
X *A. syriaca*



PERIPLOCA GRAECA

Figure 3 Distribution maps



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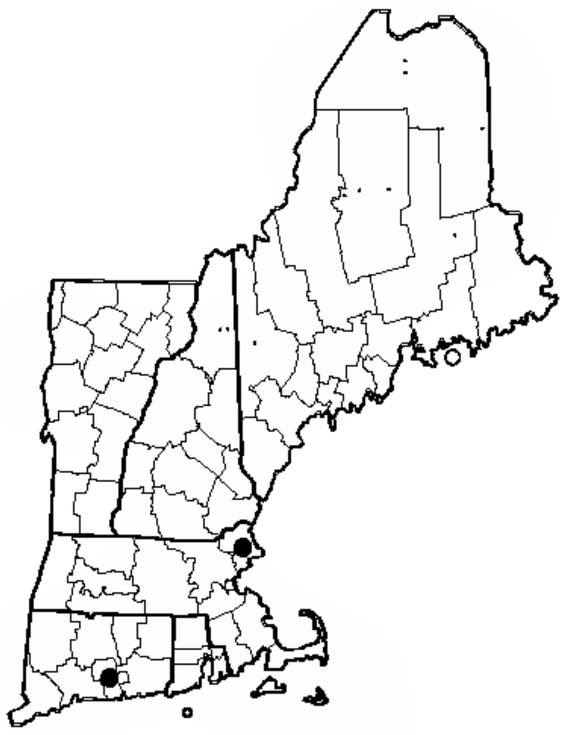

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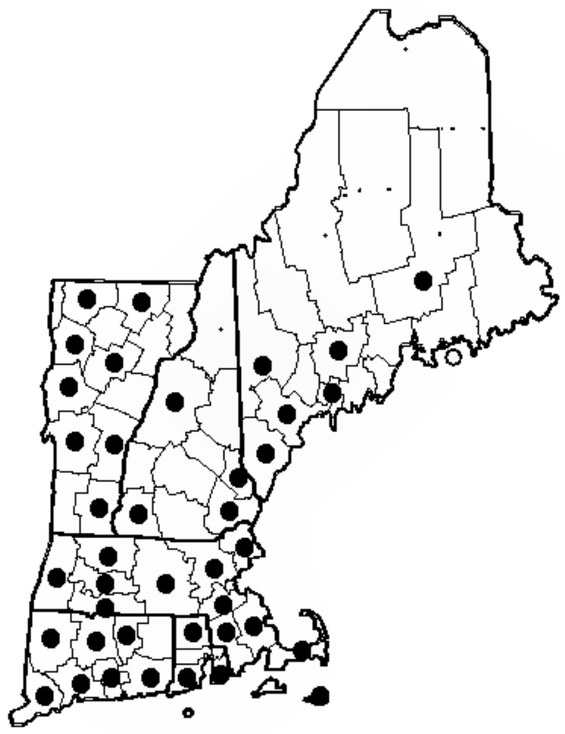

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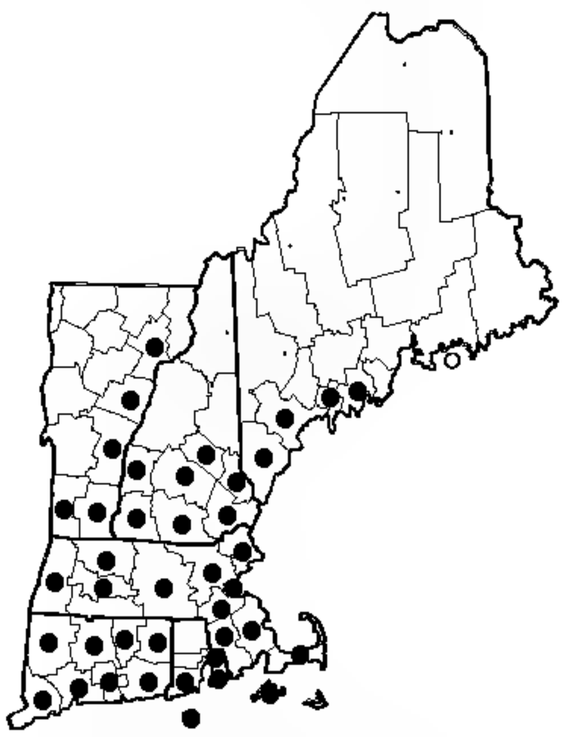
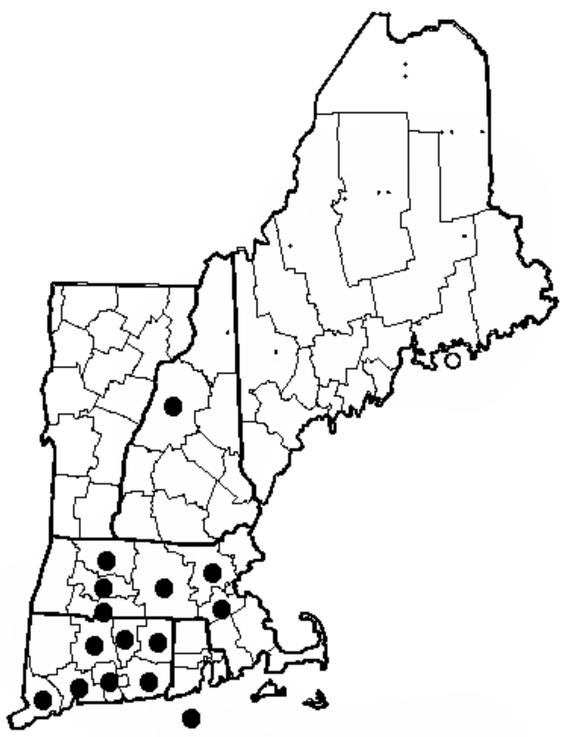


VINCETOXICUM NIGRUM



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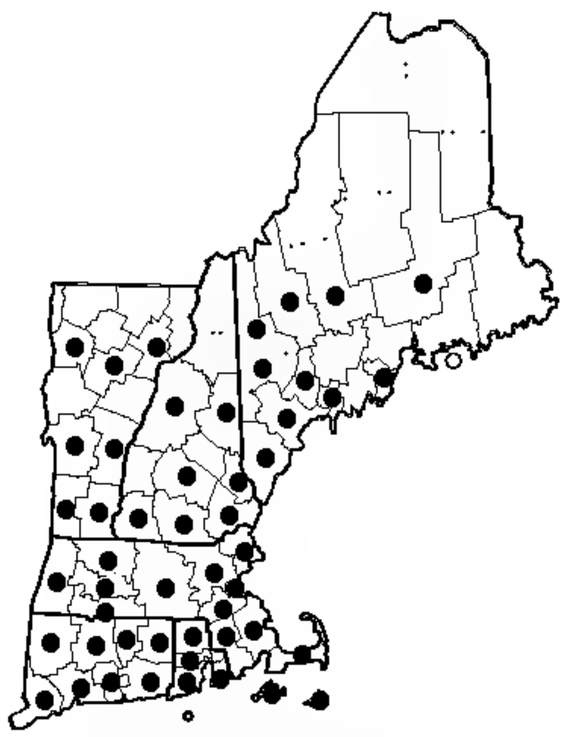
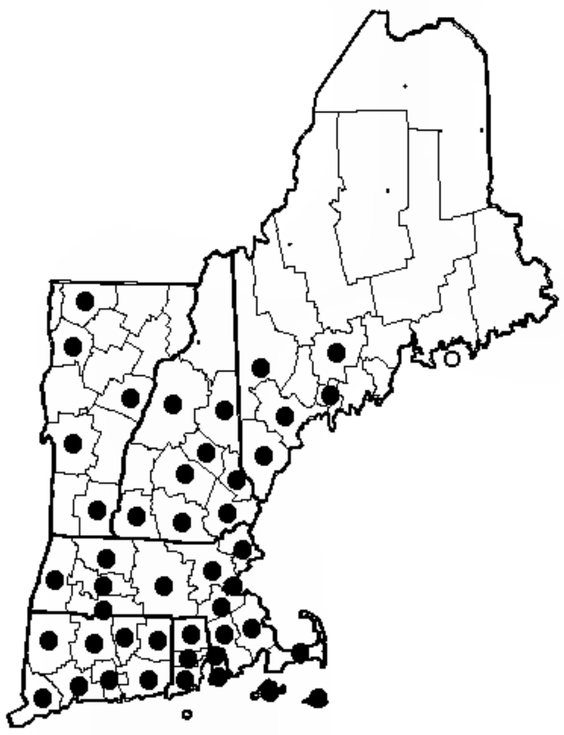


Crocanthemum bicknellii



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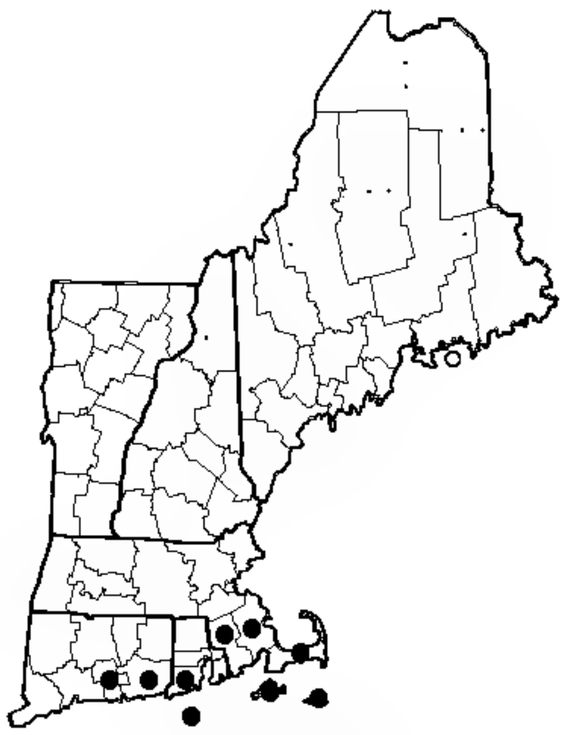

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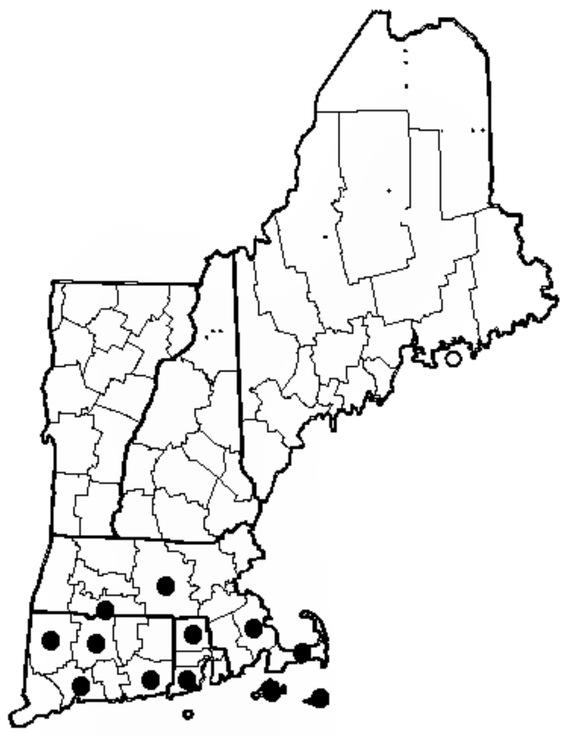

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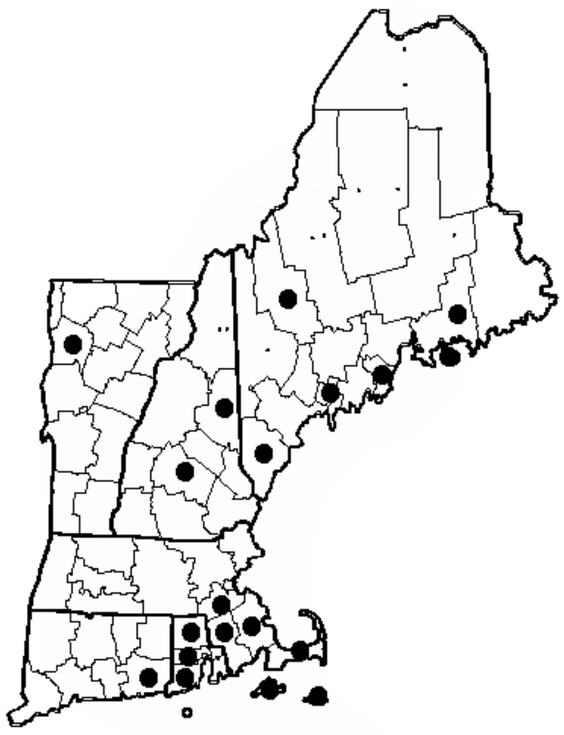
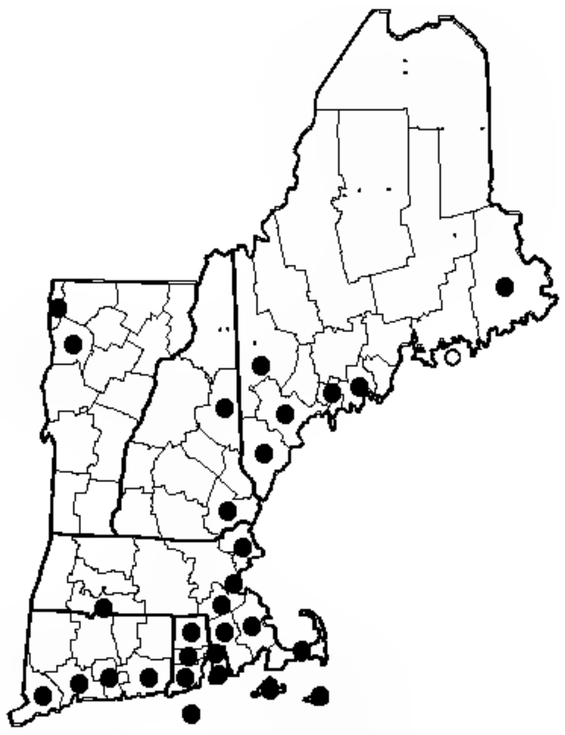
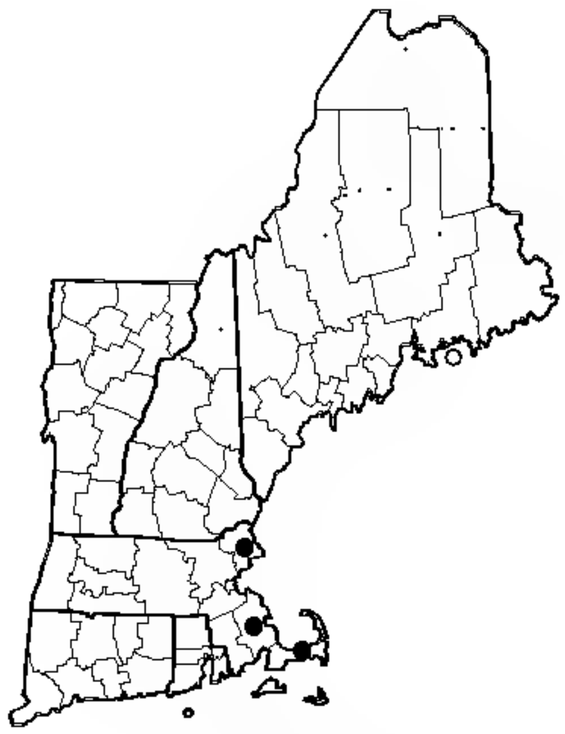
Figure 4 Distribution maps



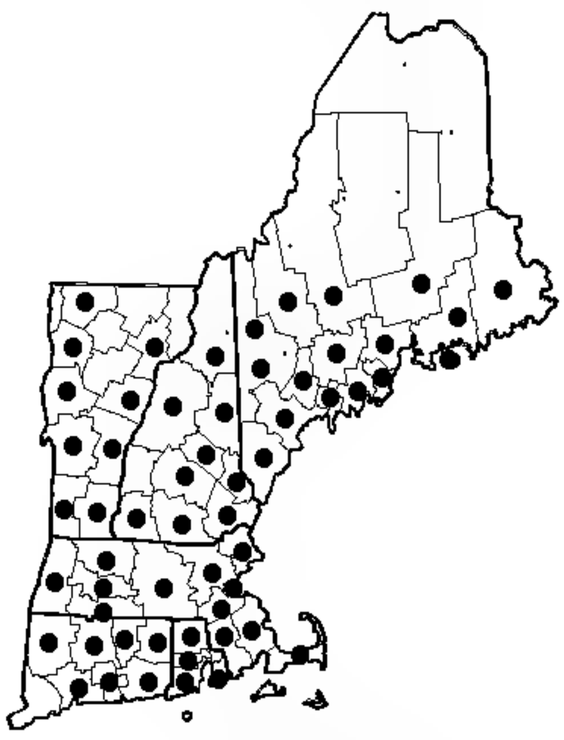
Hudsonia ericoides



Hudsonia tomentosa



Hudsonia ericoides
X *H. tomentosa*



Lechea intermedia
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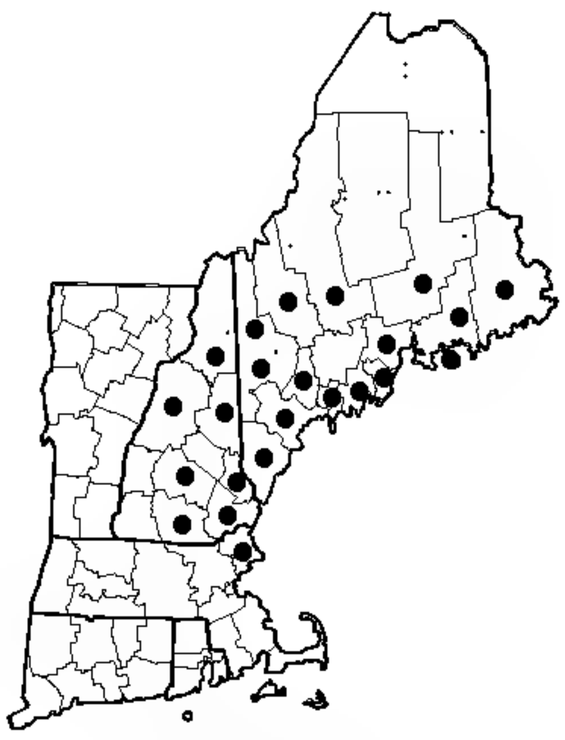
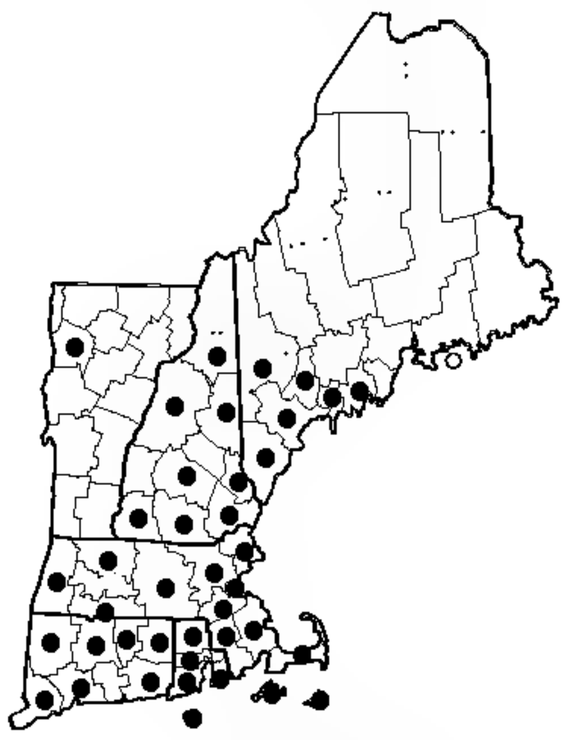
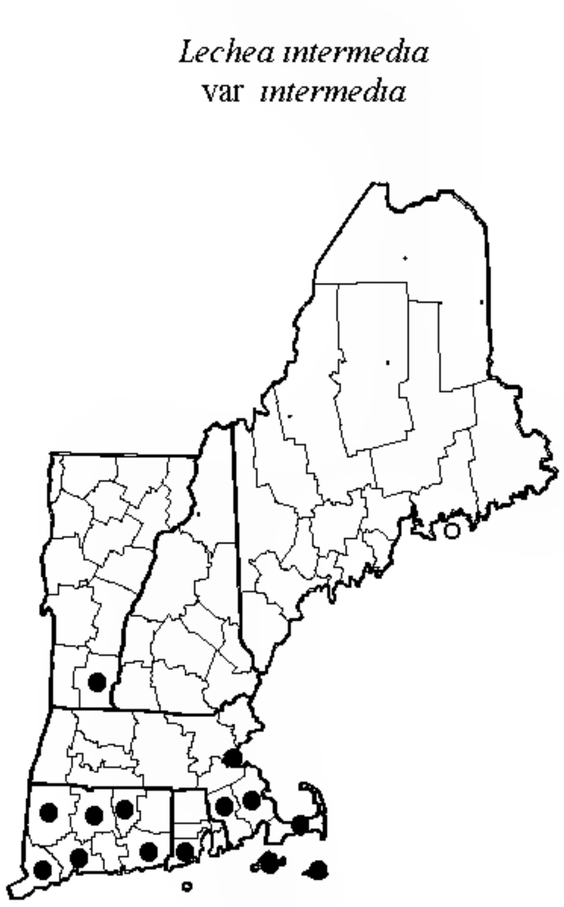


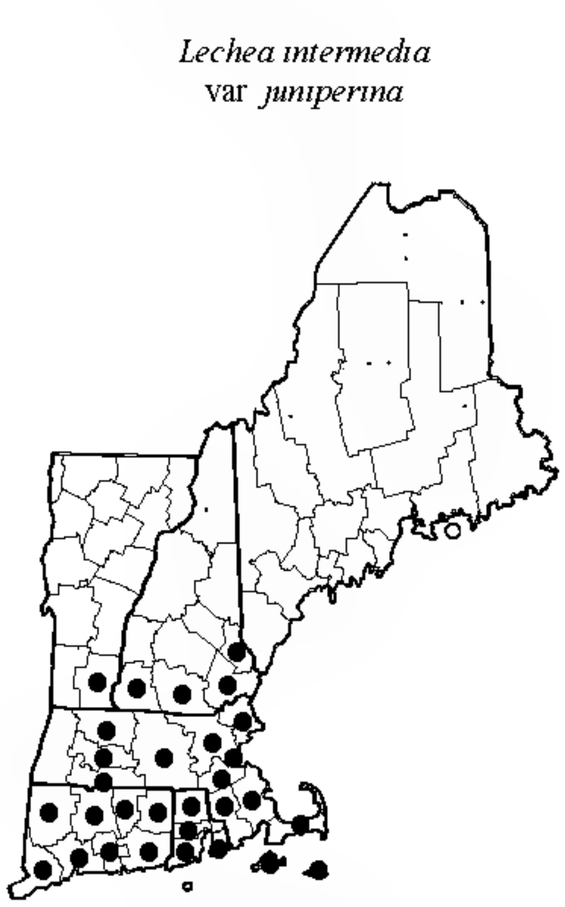
Lechea intermedia
var *juniperina*



Lechea maritima
var *maritima*



Lechea minor



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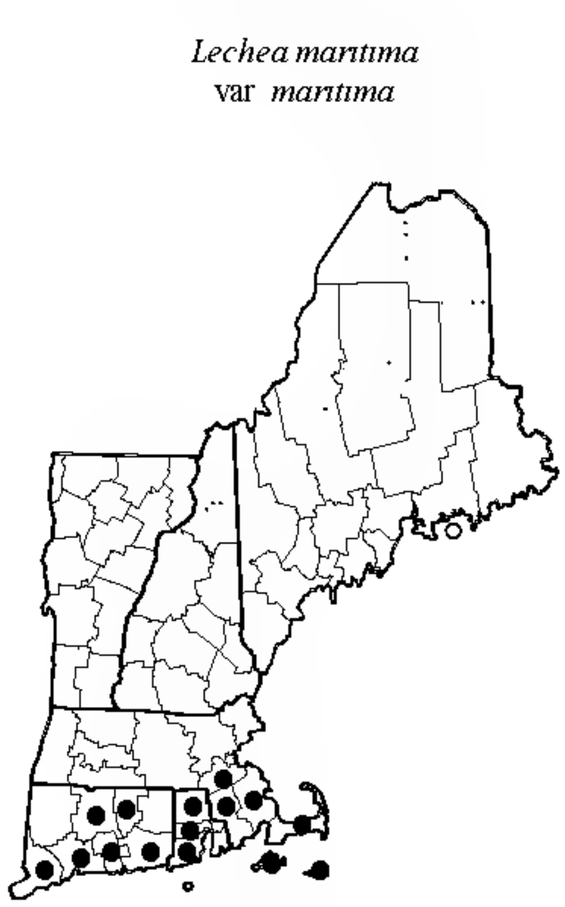
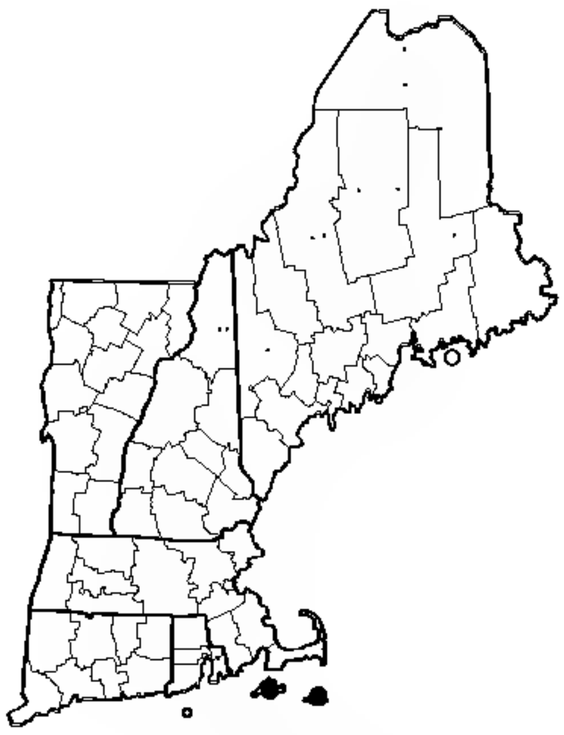
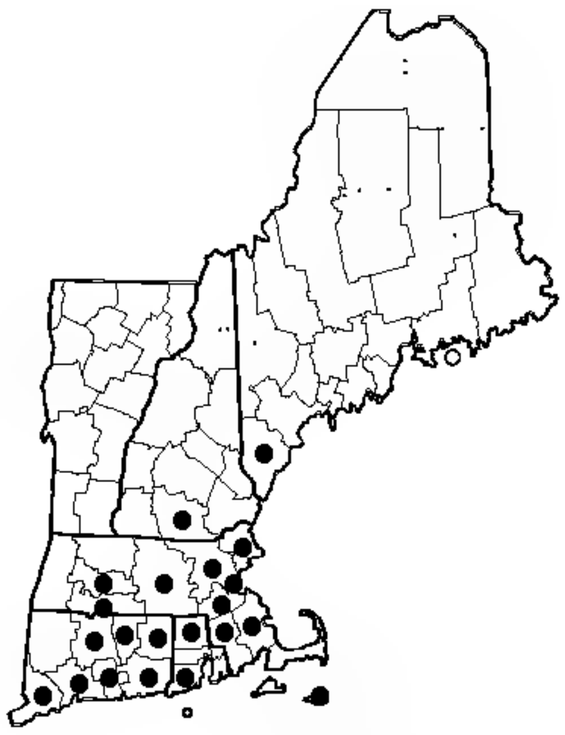


Lechea pulchella
var *pulchella*

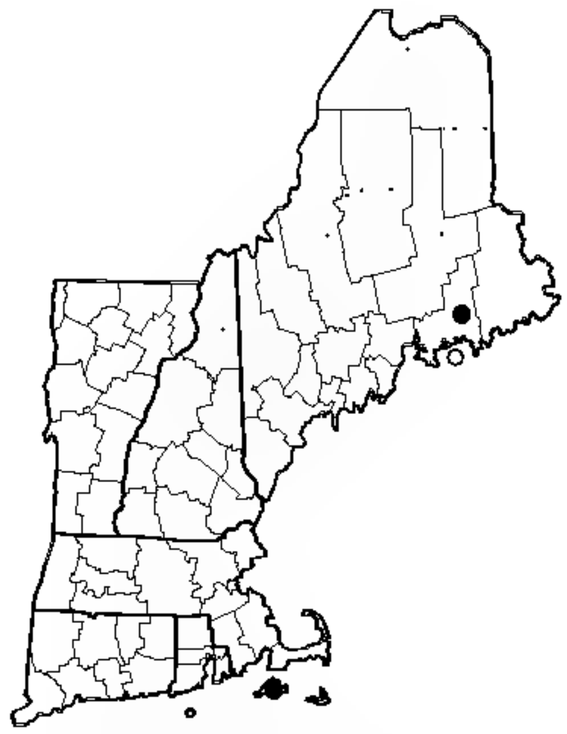
Figure 5 Distribution maps



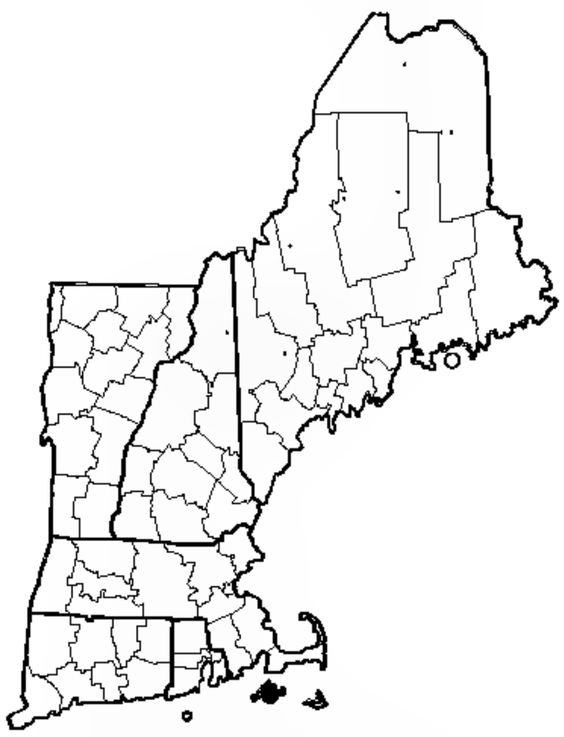
Lechea pulchella
var *moniliformis*



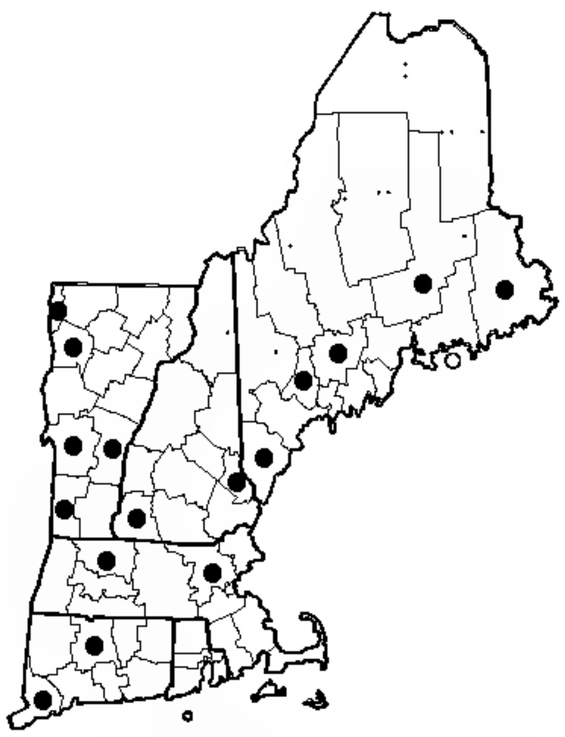
Lechea tenuifolia



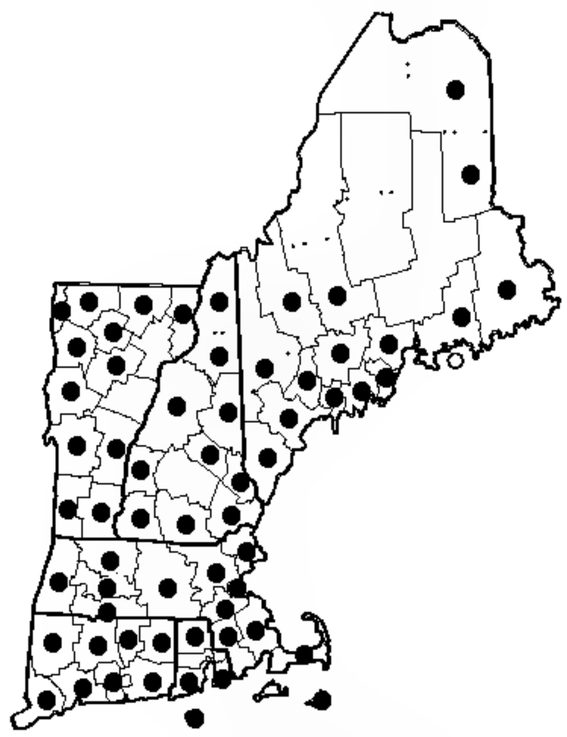
Lechea maritima var *maritima*
X *L. minor*



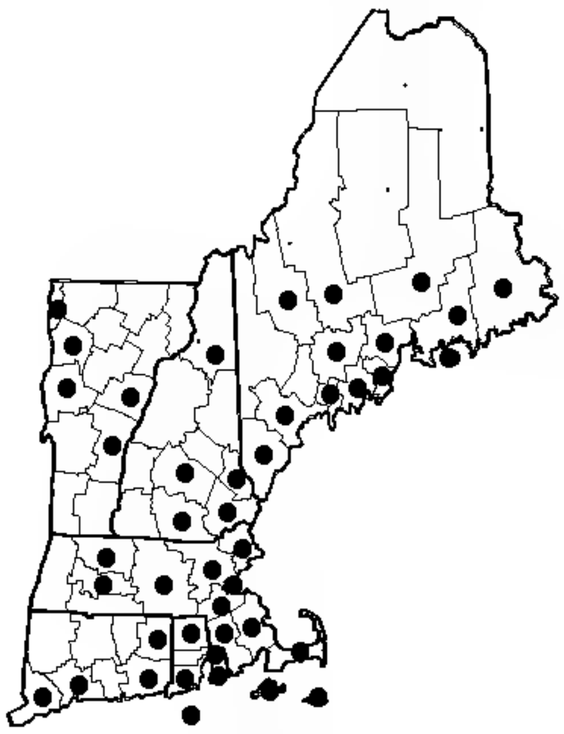
Lechea maritima var *maritima*
X *L. mucronata*



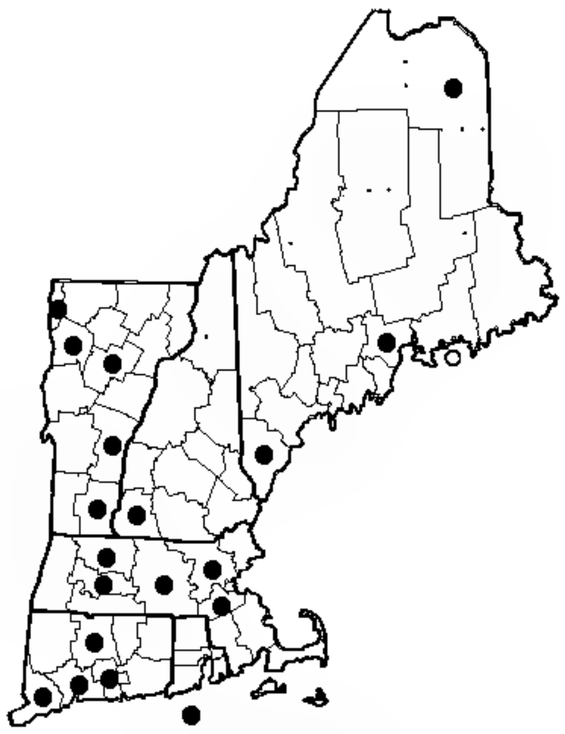
CAI YSTEGIA PUBESCENS



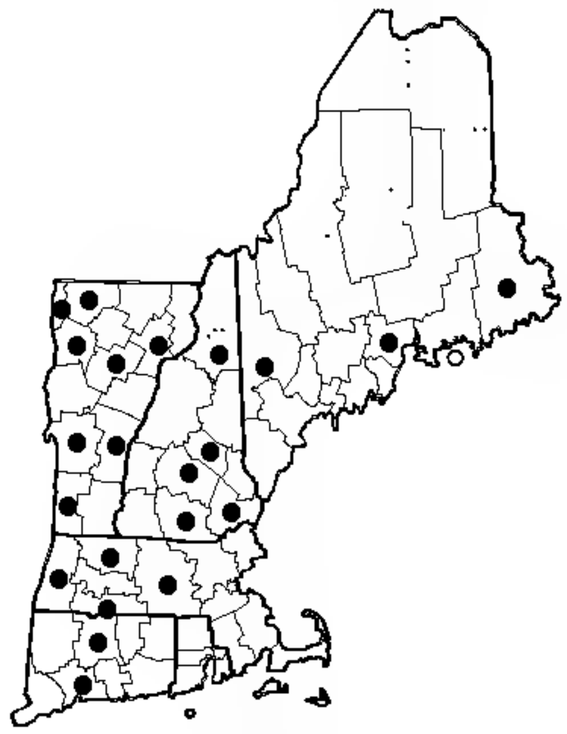
CAI YSTEGIA SEPIUM
subsp. *SEPIUM*



Calystegia sepium
subsp. *americana*

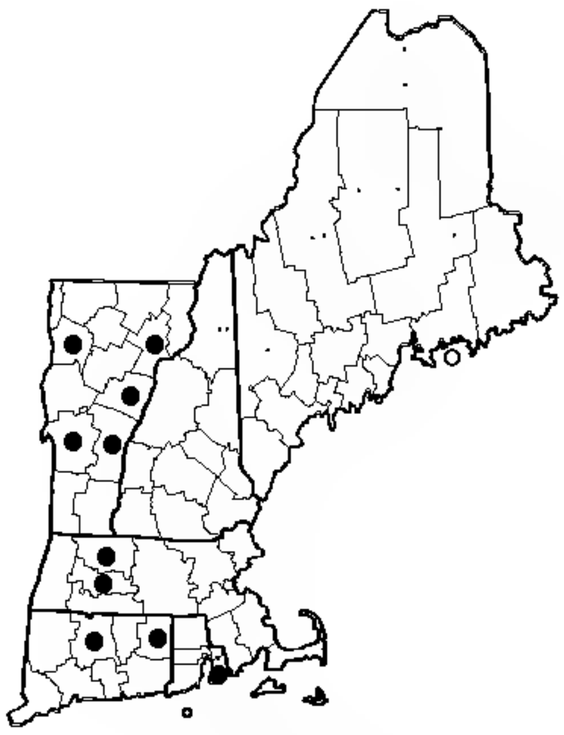


Calystegia sepium
subsp. *angulata*

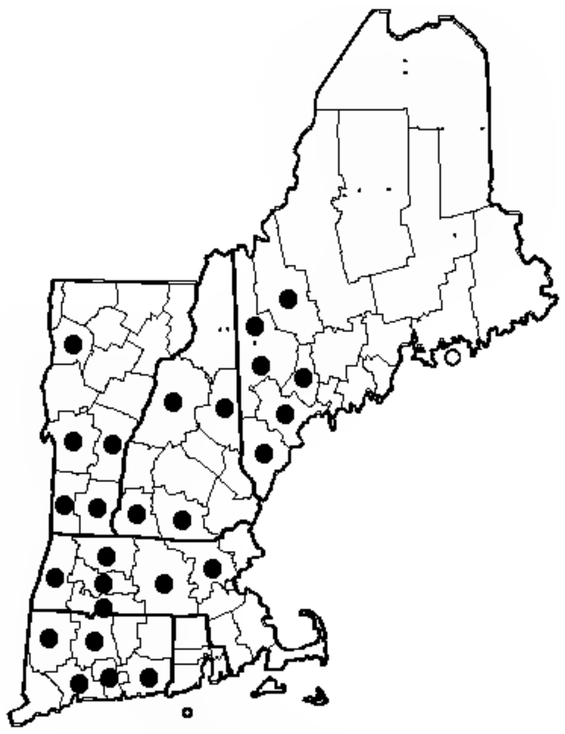


Calystegia sepium
subsp. *appalachiana*

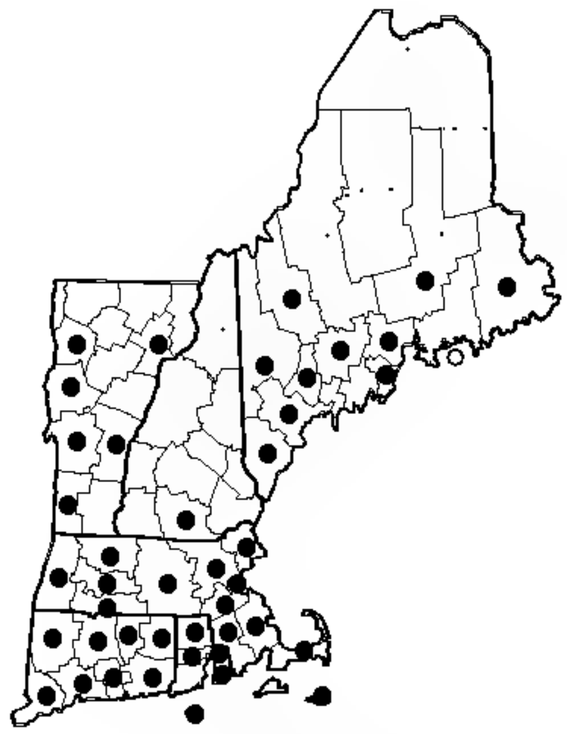
Figure 6 Distribution maps



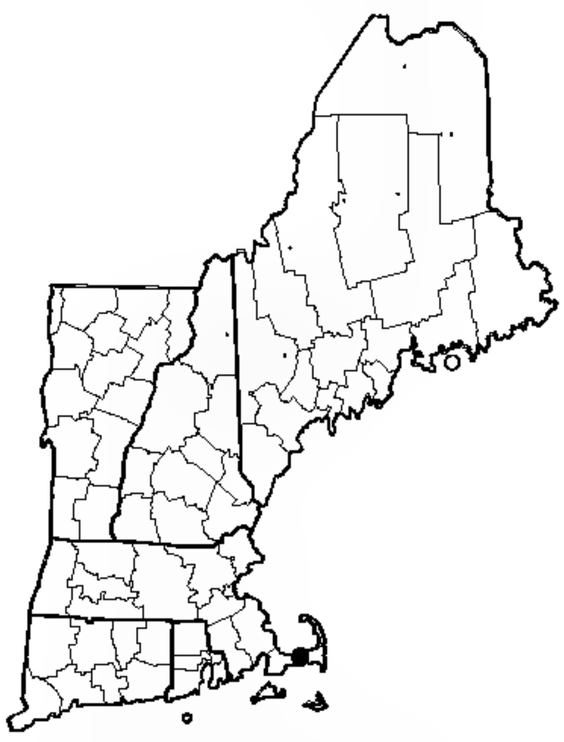
Calystegia silvatica
subsp. *fraternıflora*



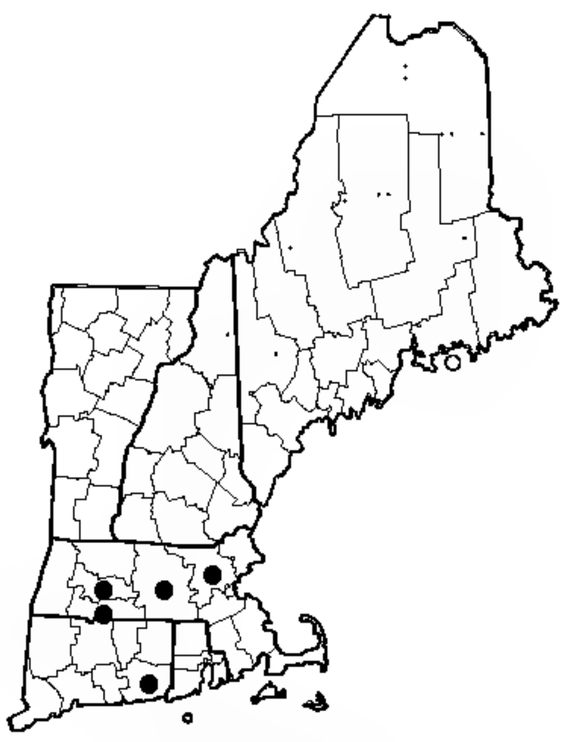
Calystegia spithamaea
subsp. *spithamaea*



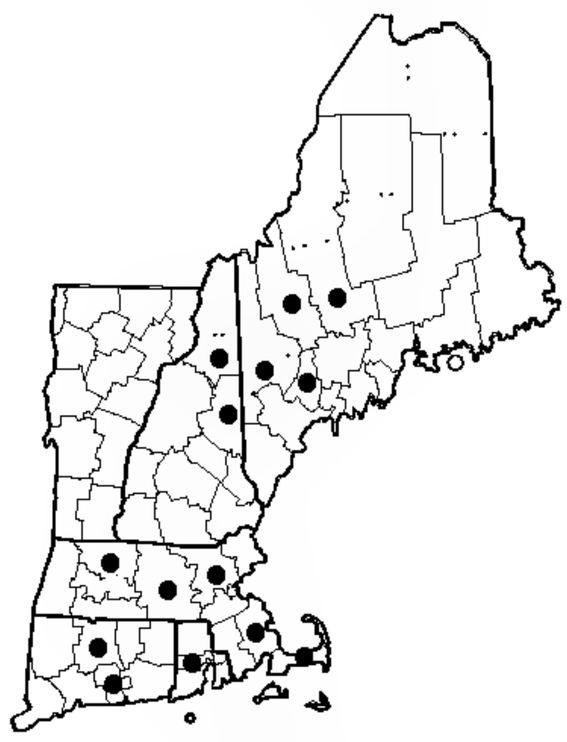
CONVOLVULUS ARVENSIS



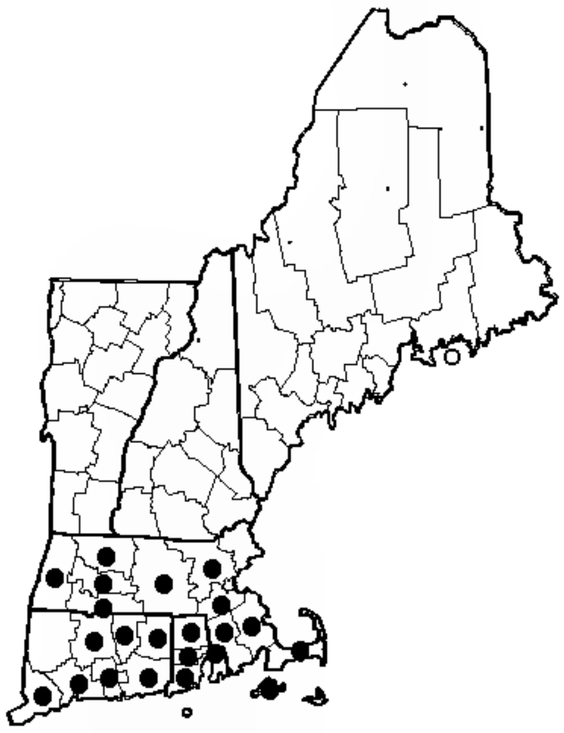
CUSCUTA APPROXIMATA



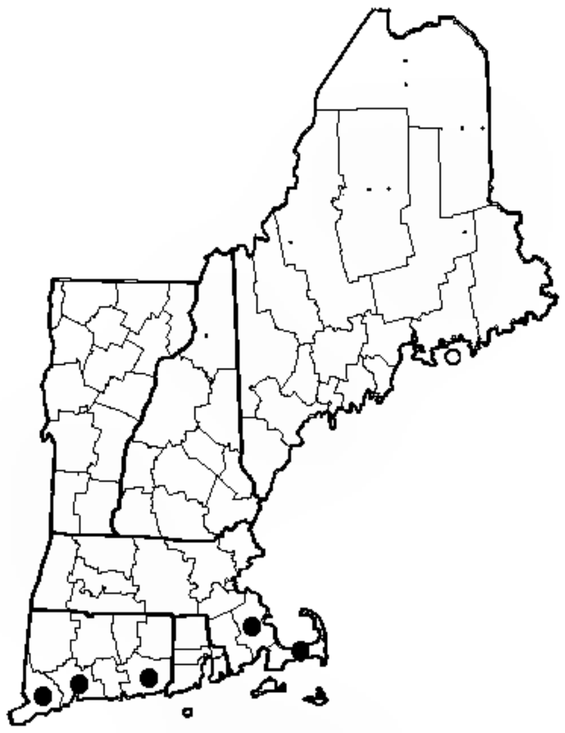
CUSCUTA CAMPESTRIS



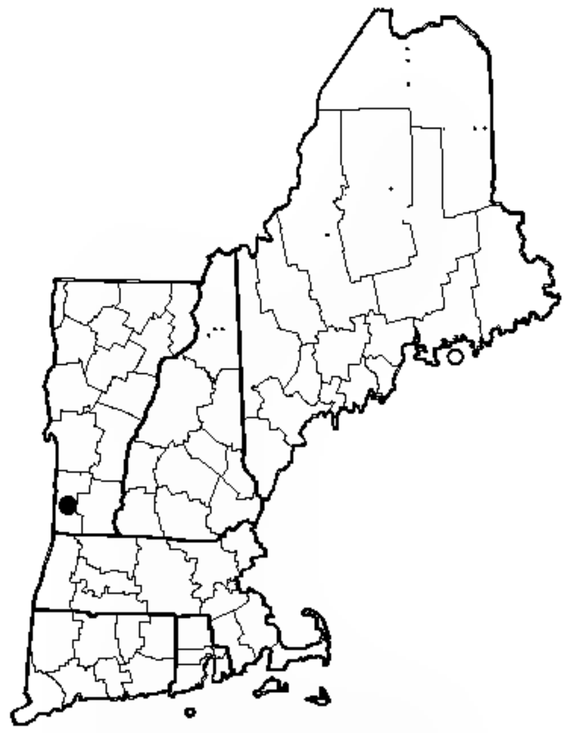
Cuscuta cephalanthi



Cuscuta compacta
var *compacta*

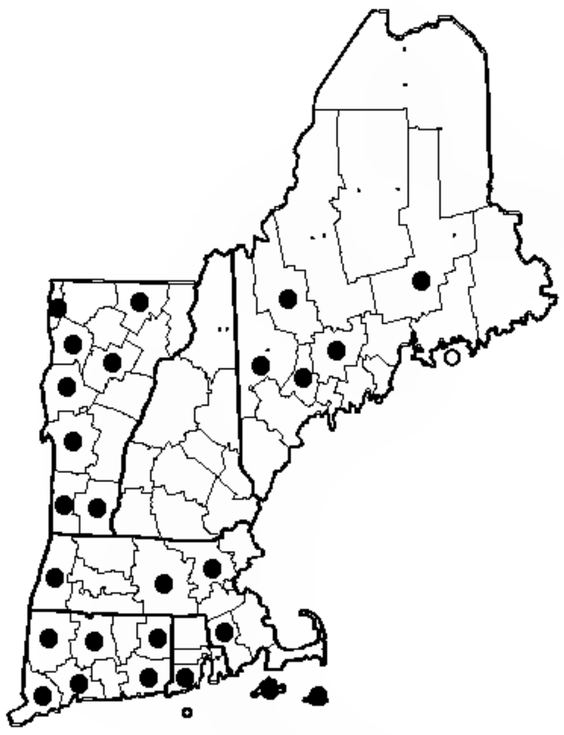


Cuscuta coryli

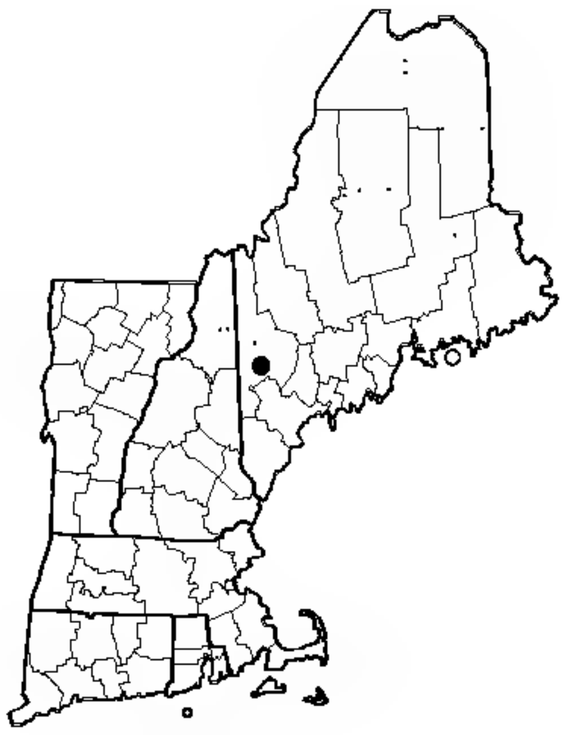


CUSCUTA EPILINUM

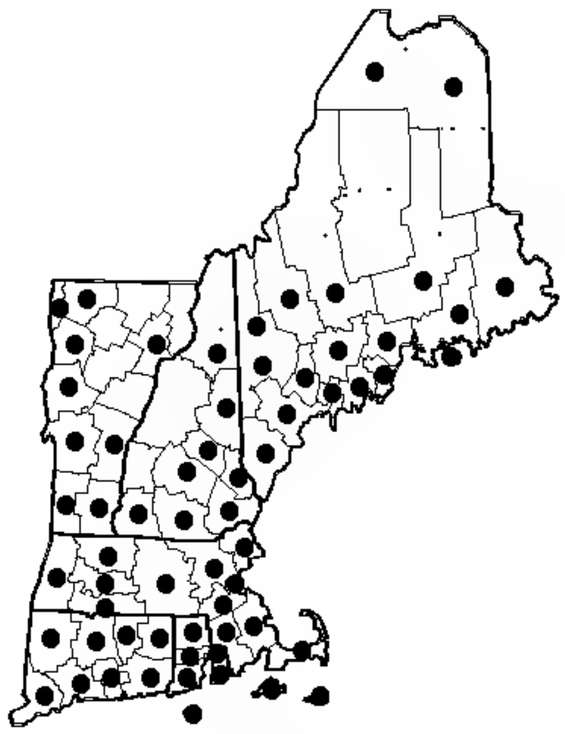
Figure 7 Distribution maps



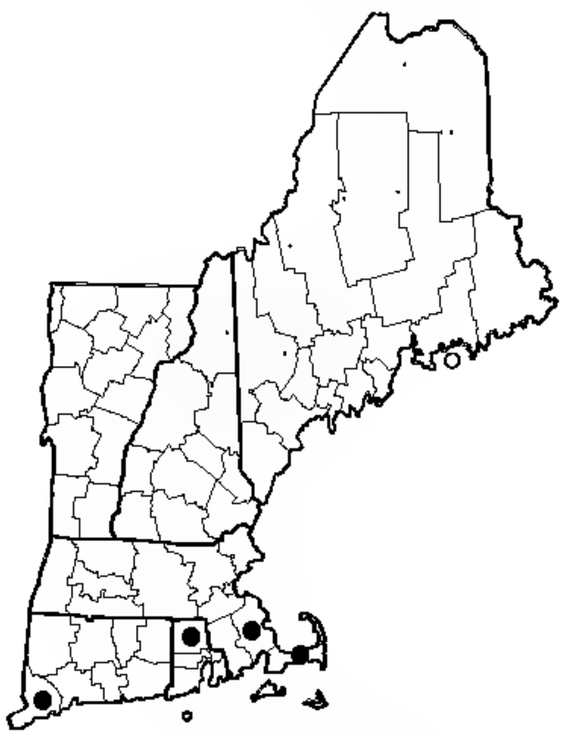
CUSCUTA EPITHYMUM



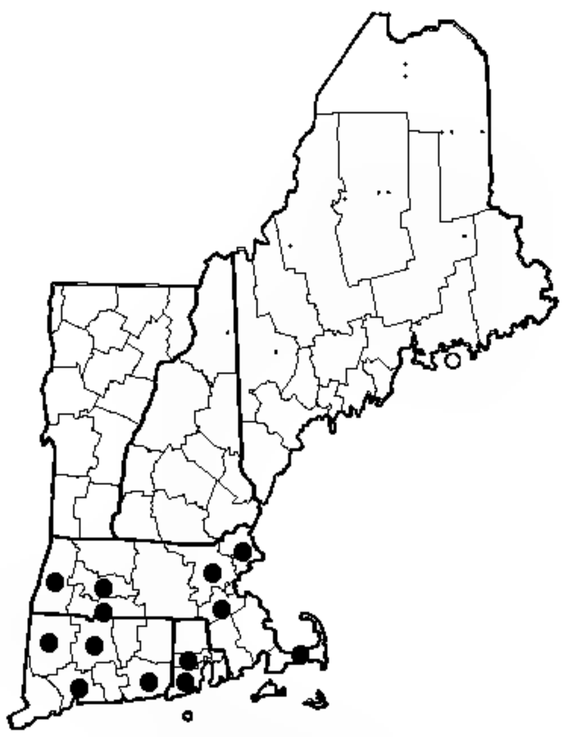
CUSCUTA EUROPAEA



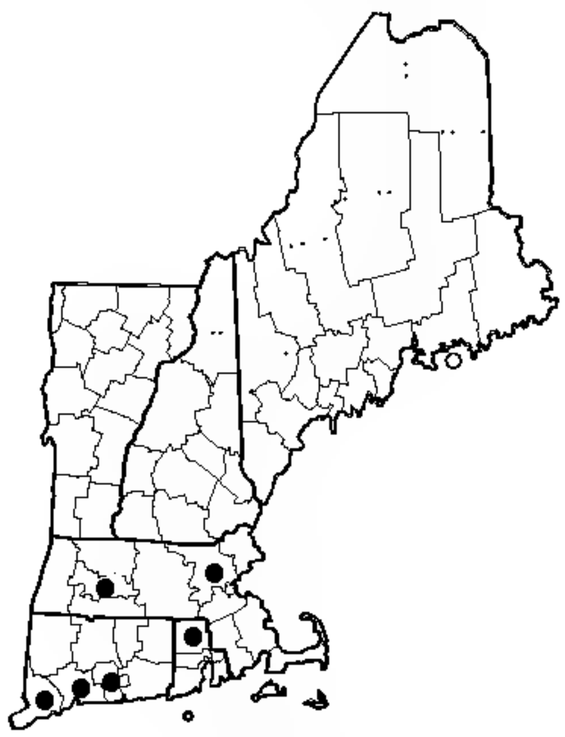
Cuscuta gronovii
var *gronovii*



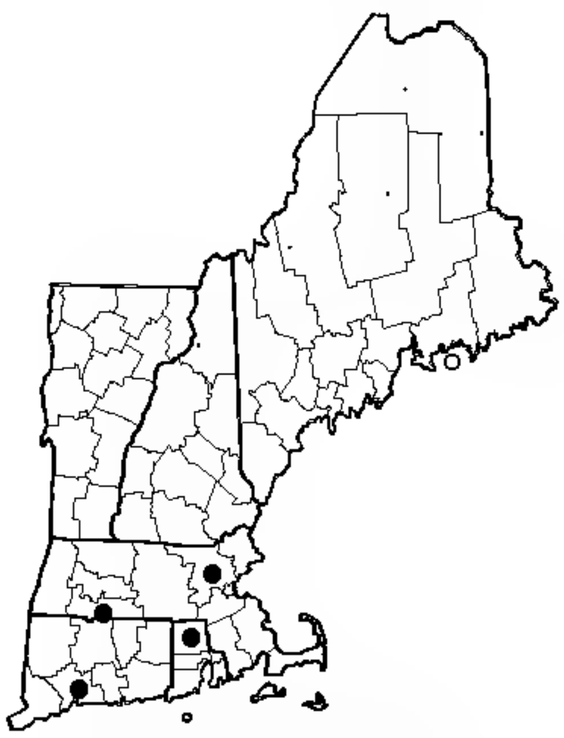
CUSCUTA INDECORA
var *INDECORA*



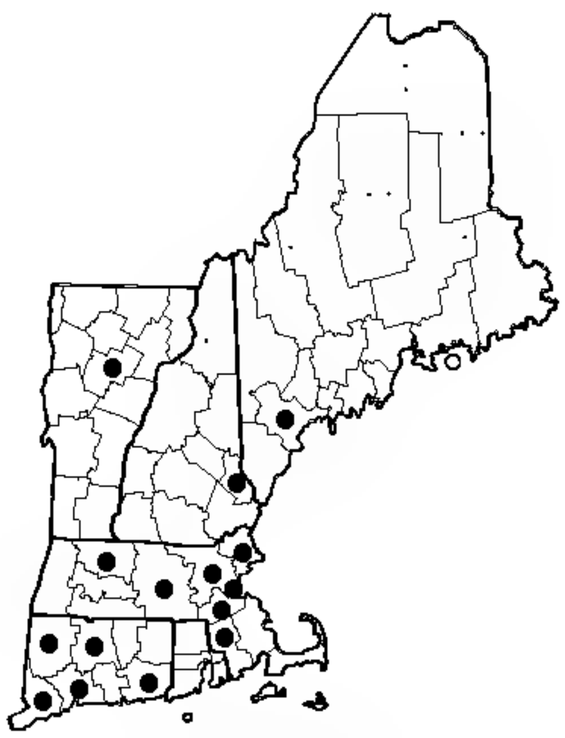
Cuscuta pentagona



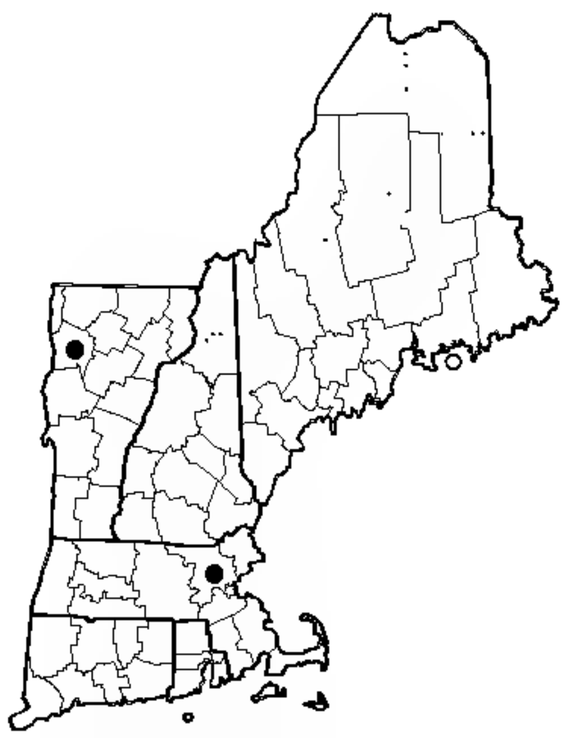
Cuscuta polygonorum



IPOMOEA COCCINEA

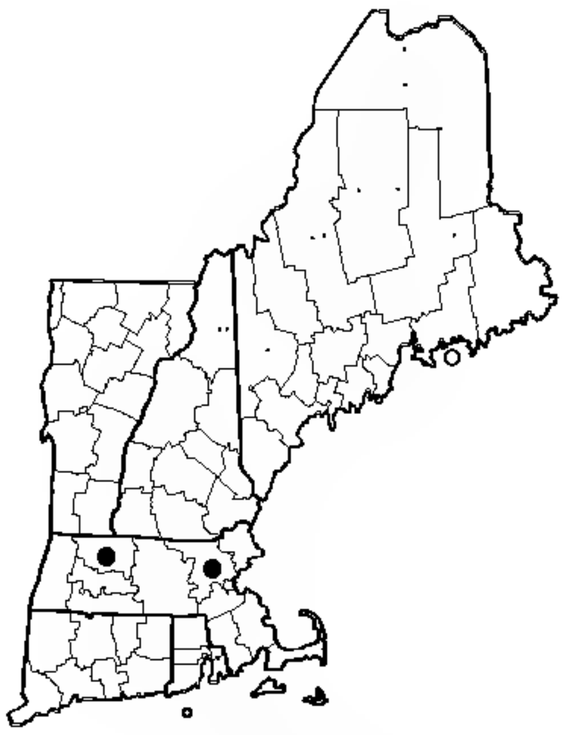


IPOMOEA HEDERACEA

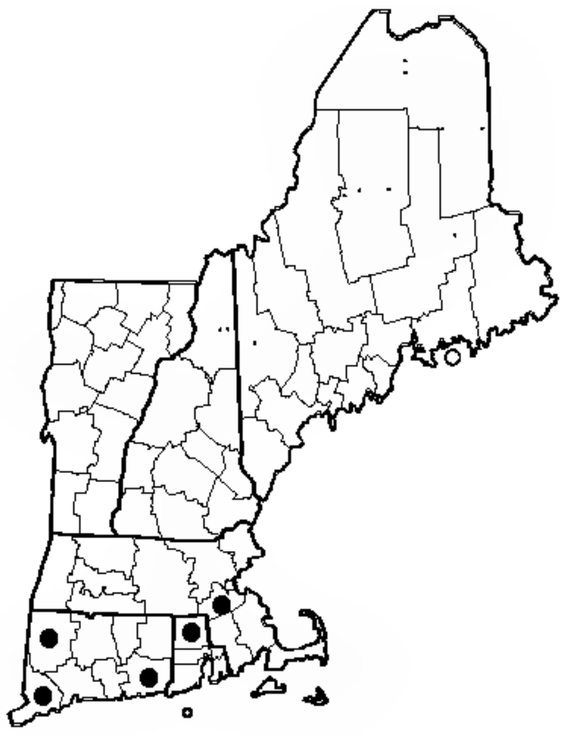


IPOMOEA HEDERIFOLIA

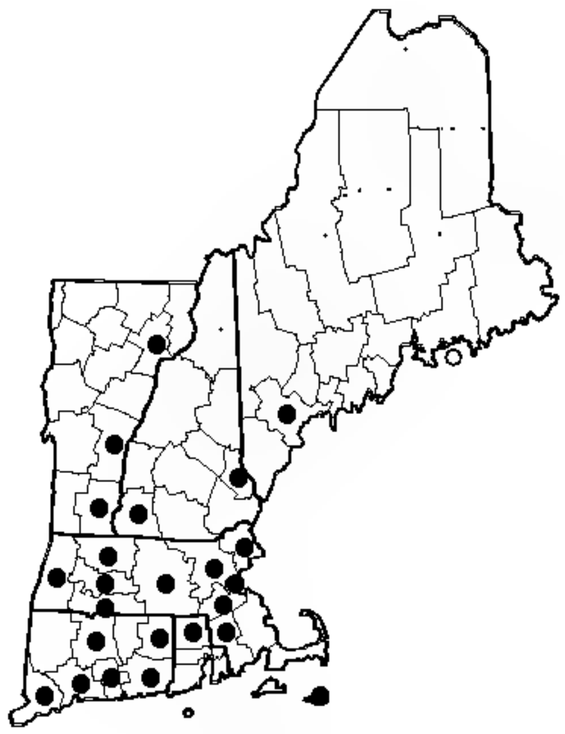
Figure 8 Distribution maps



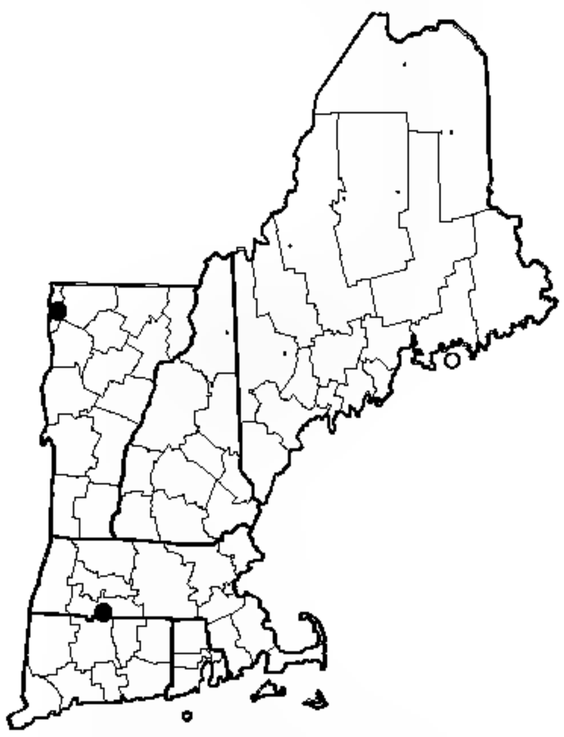
IPOMOEA LACUNOSA



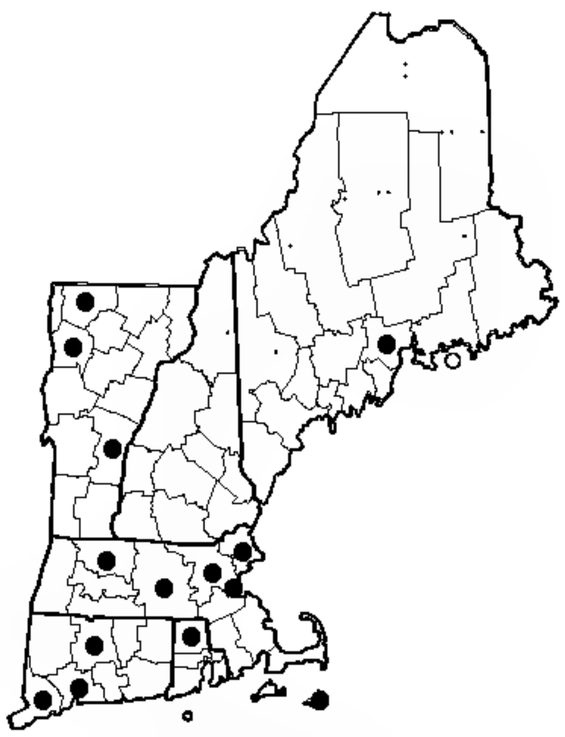
Ipomoea pandurata



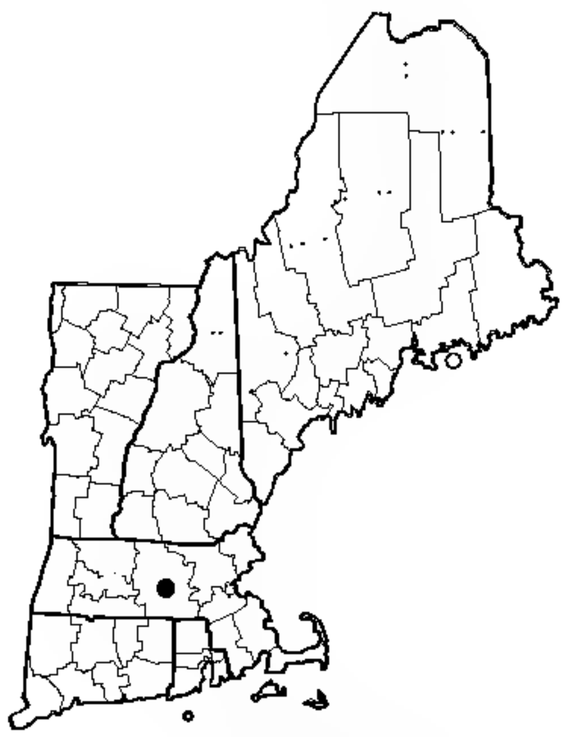
IPOMOEA PURPUREA



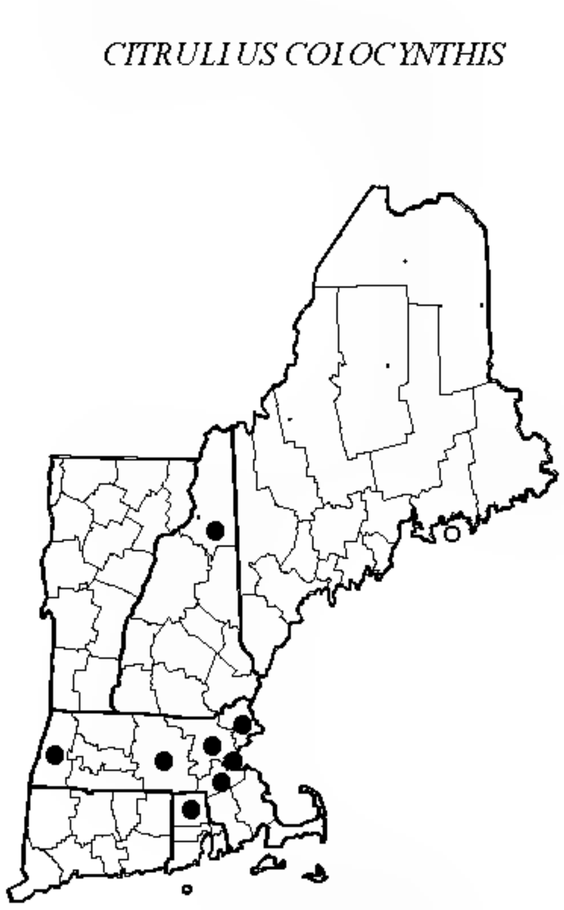
CITRULLUS COLOCYNTHIS



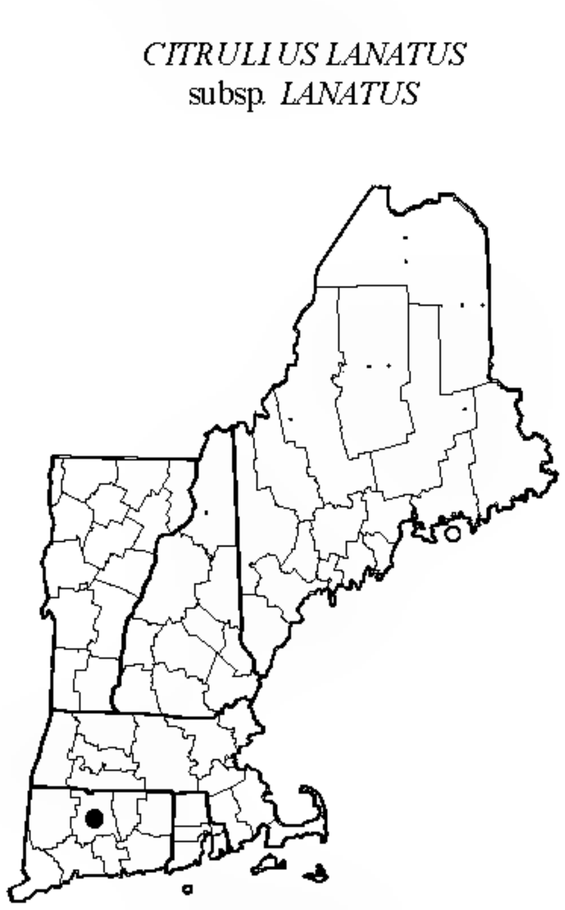
CITRULLUS LANATUS
subsp. *LANATUS*



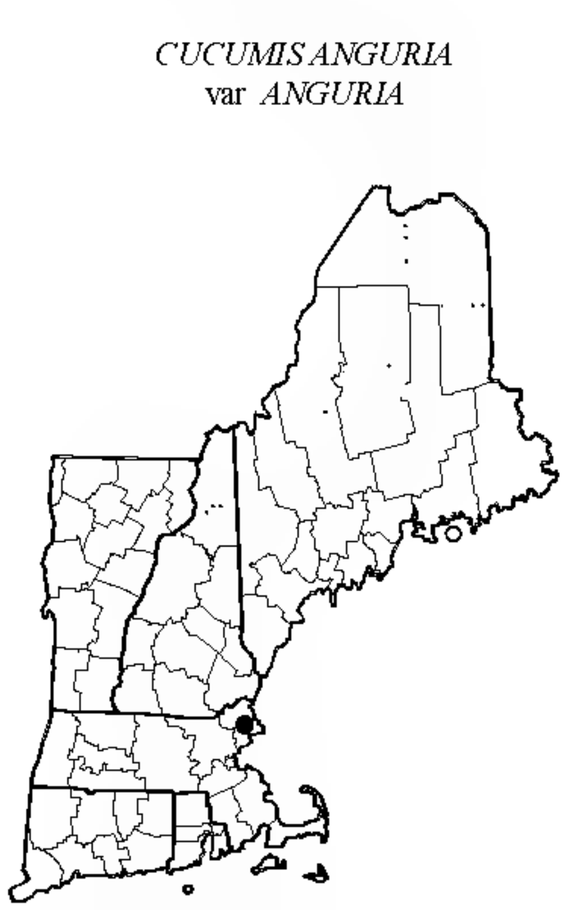
CUCUMIS ANGURIA
var *ANGURIA*



CUCUMIS MELO
subsp. *MELO*

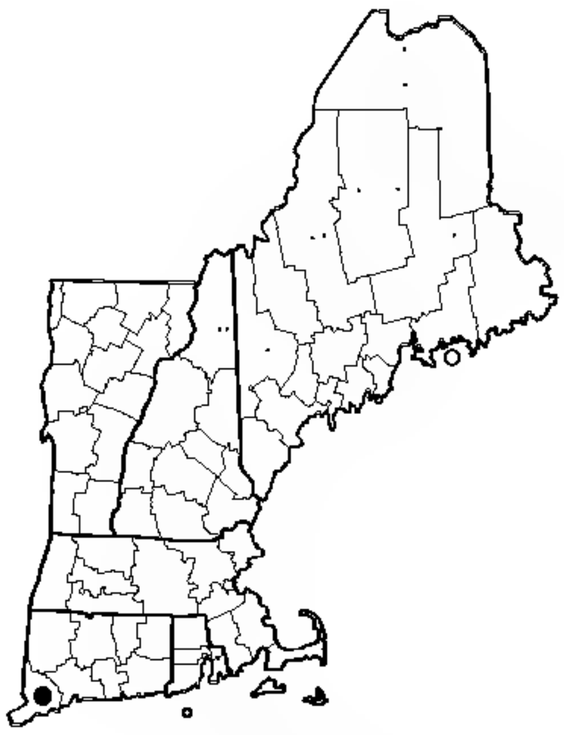


CUCUMIS MELO
subsp. *AGRESTIS*

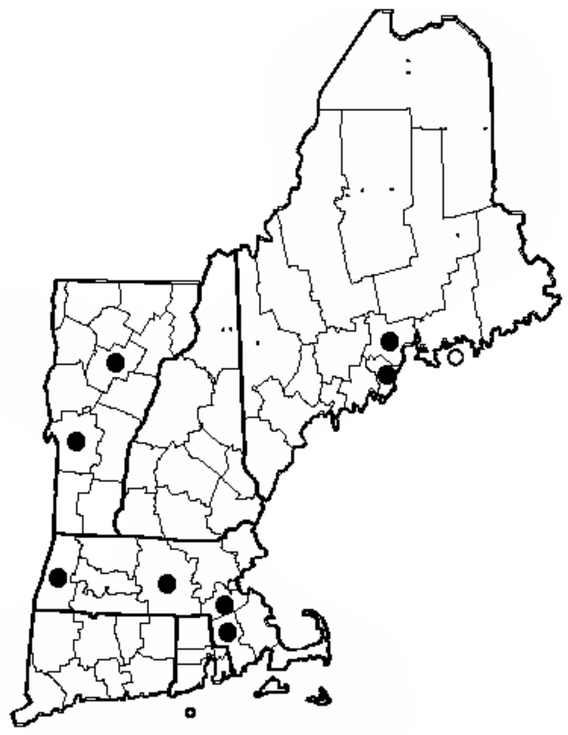


CUCUMIS MYRIOCARPUS

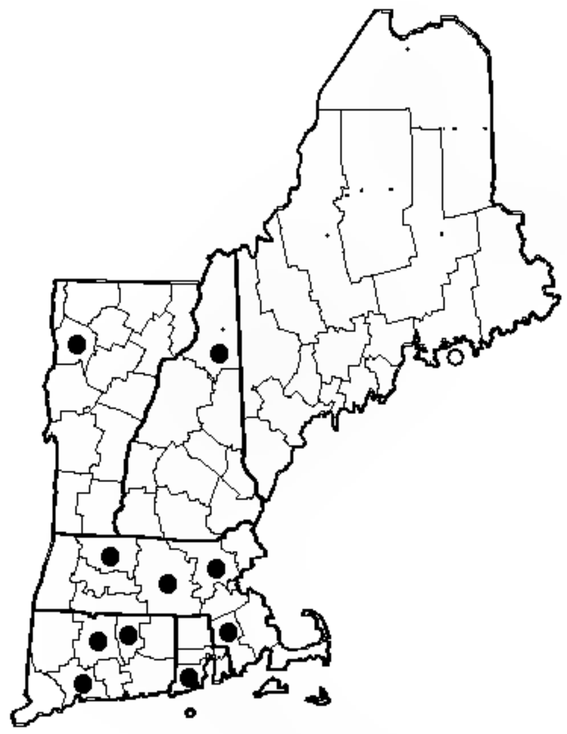
Figure 9 Distribution maps



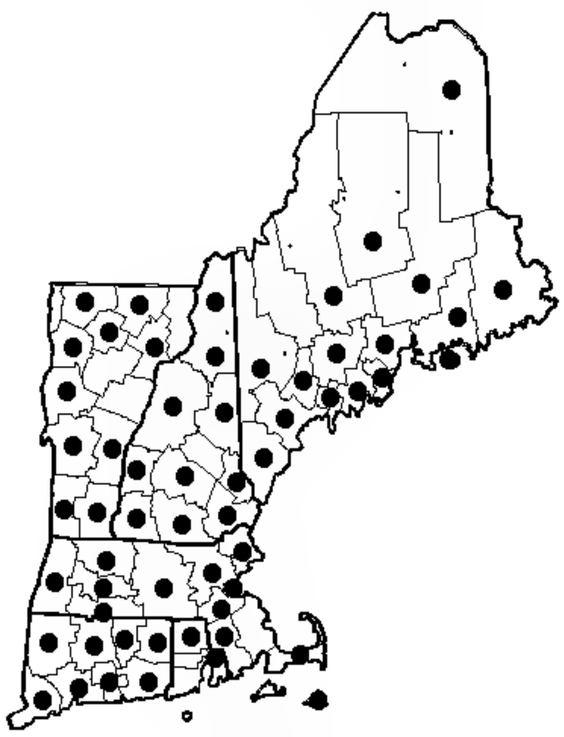
CUCUMIS SATIVUS
var *SATIVUS*



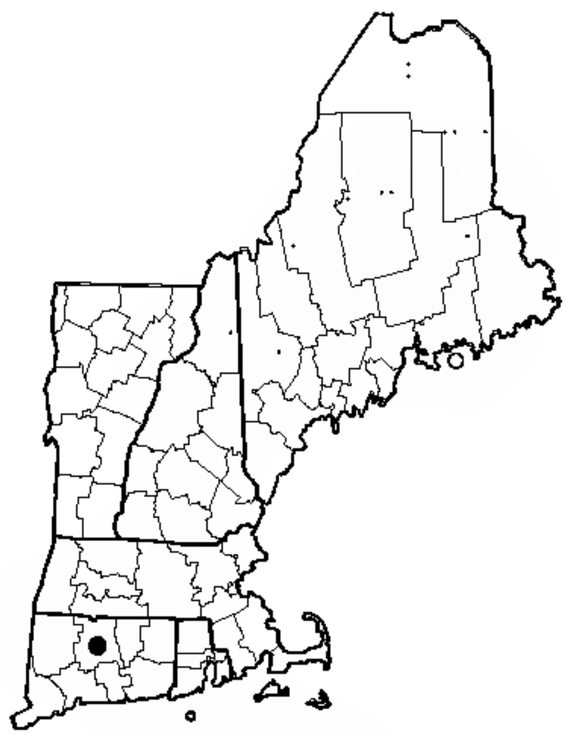
CUCURBITA MAXIMA



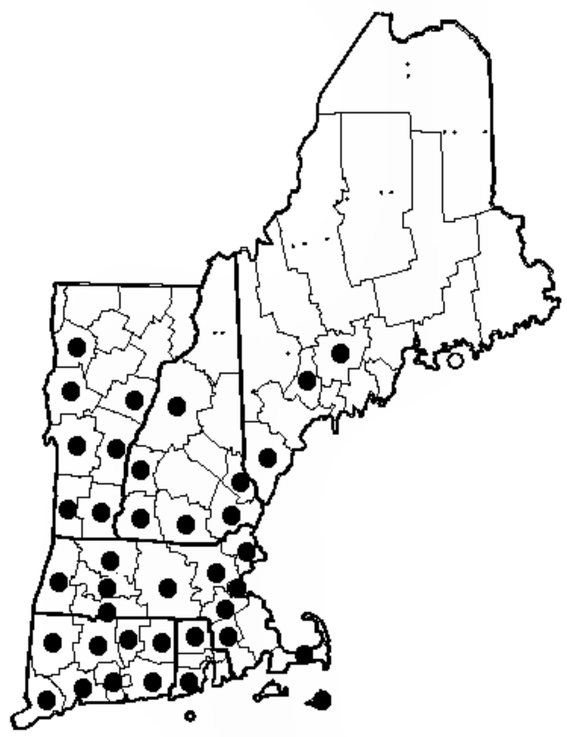
CUCURBITA PEPO
subsp *PEPO*



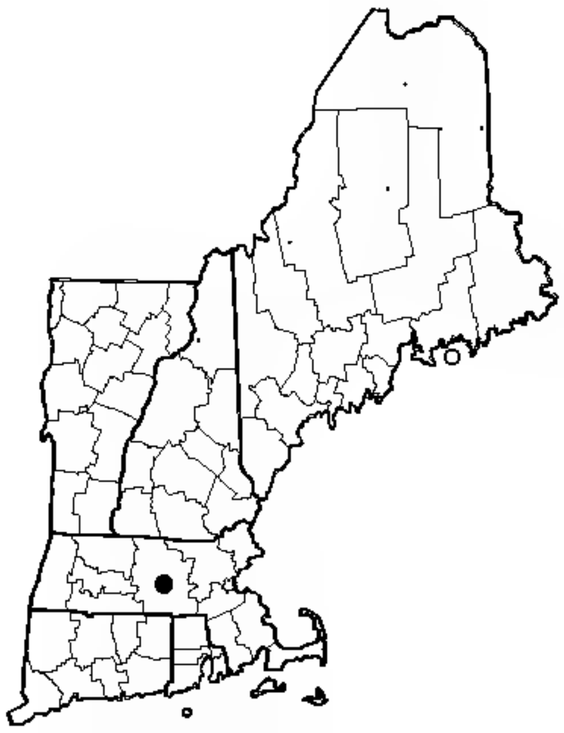
Echinocystis lobata



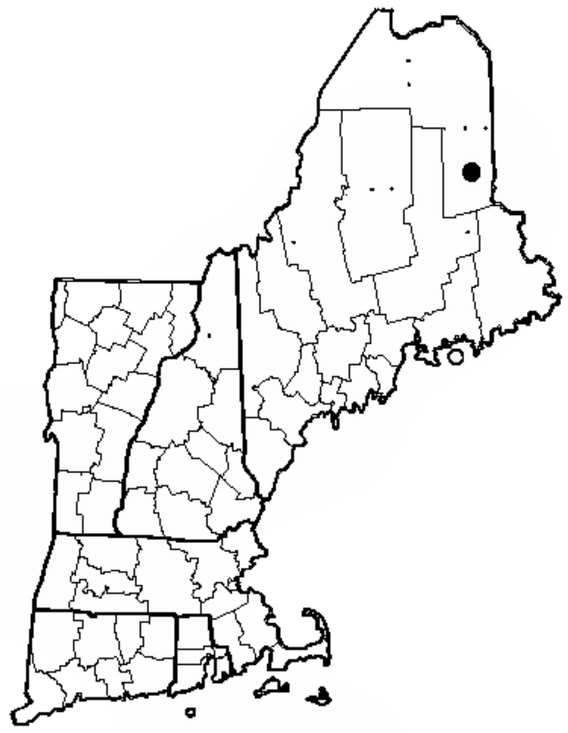
MOMORDICA CHARANTIA



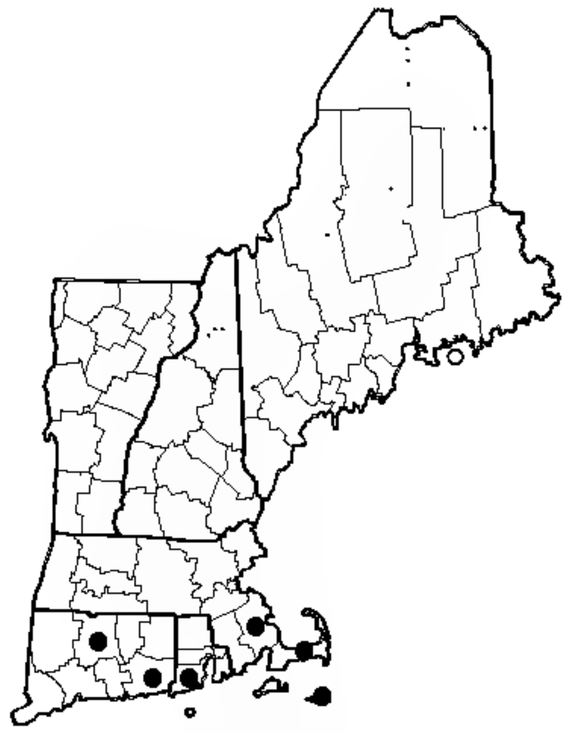
Sicyos angulatus



THLADIANTHA DUBIA

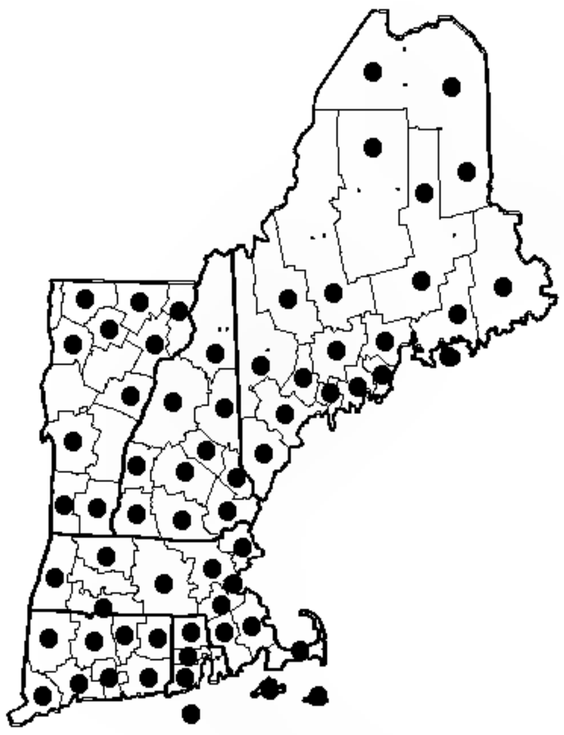


Drosera anglica

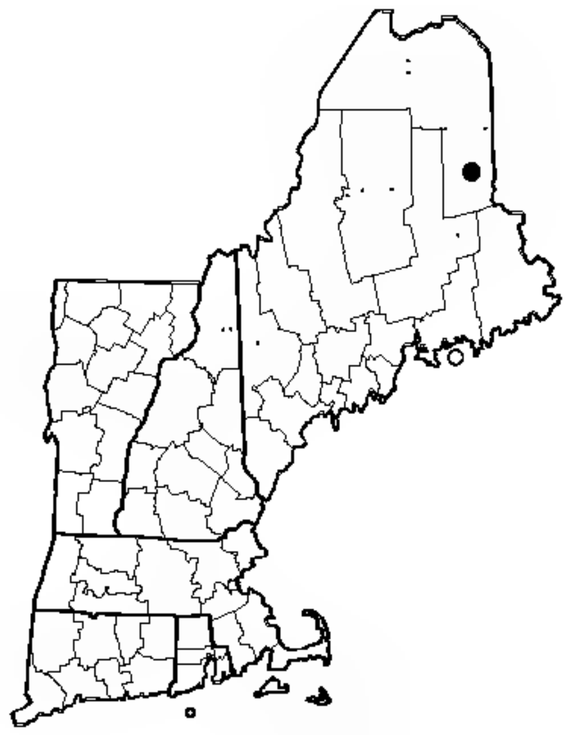


Drosera filiformis

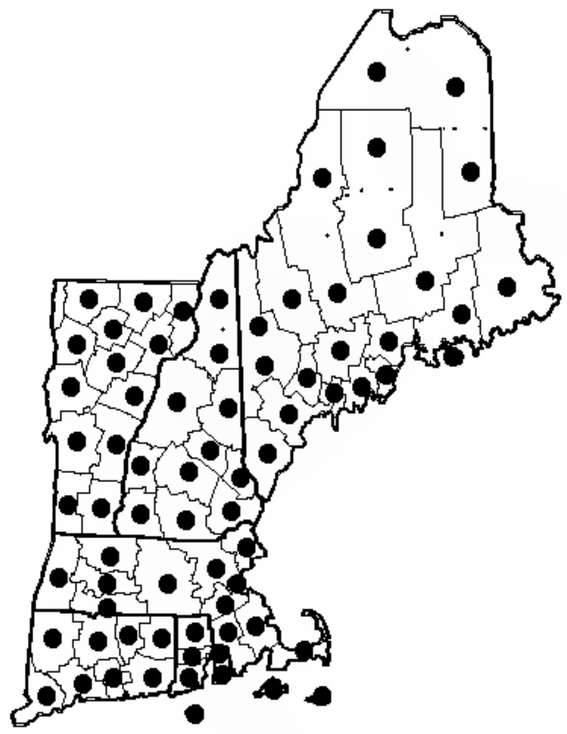
Figure 10 Distribution maps



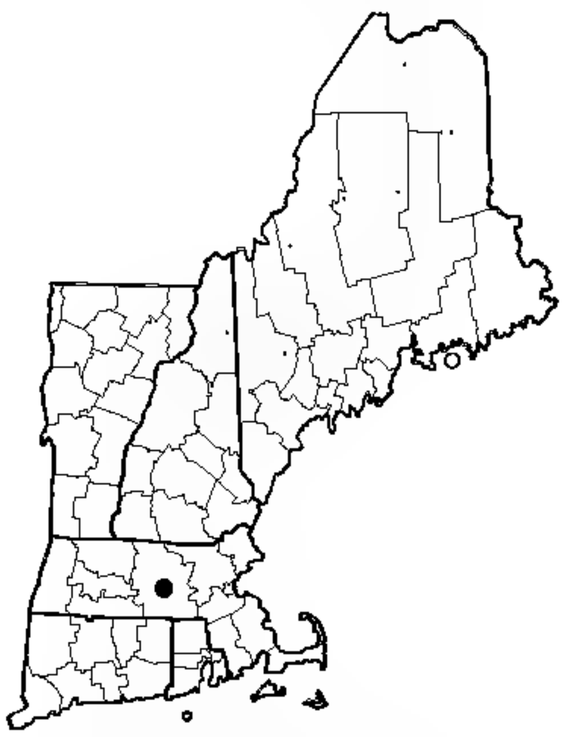
Drosera intermedia



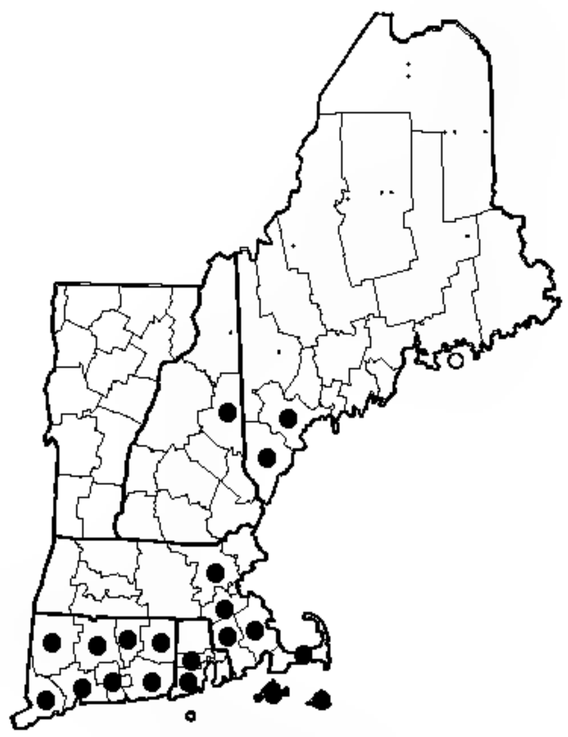
Drosera linearis



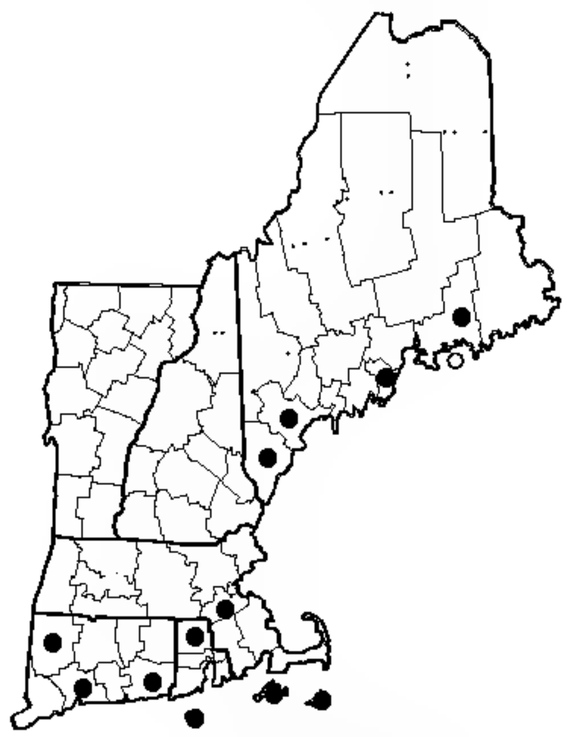
Drosera rotundifolia
var. *rotundifolia*



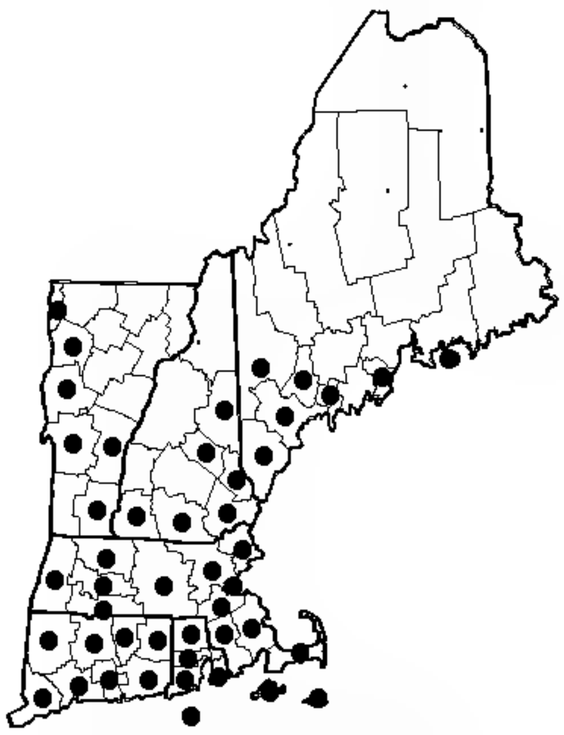
FRANKENIA PULVERENTULA



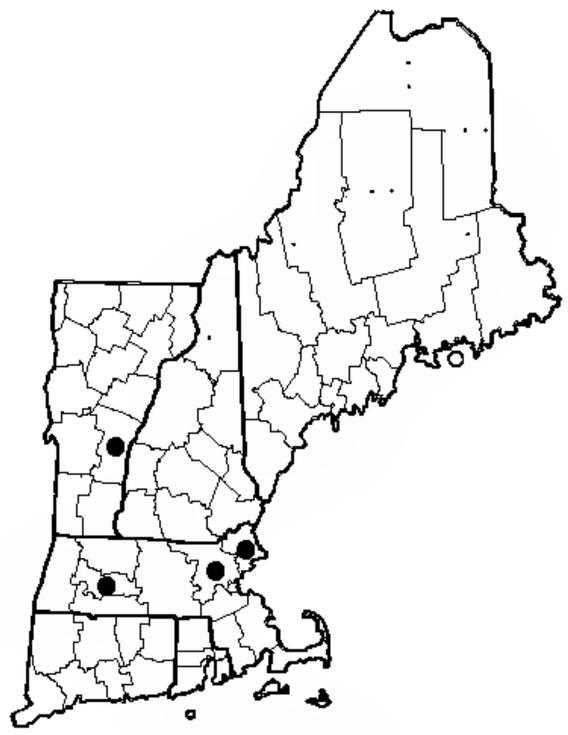
Bartonia paniculata
subsp. *paniculata*



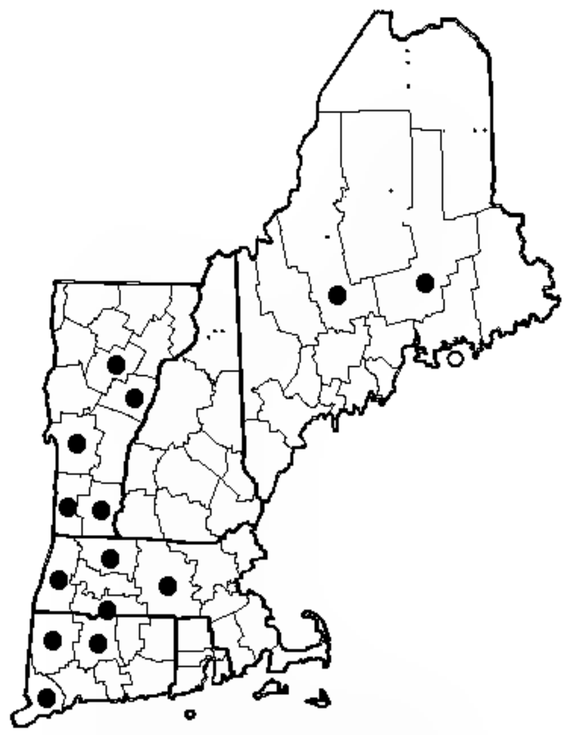
Bartonia paniculata
subsp. *iodandra*



Bartonia virginica

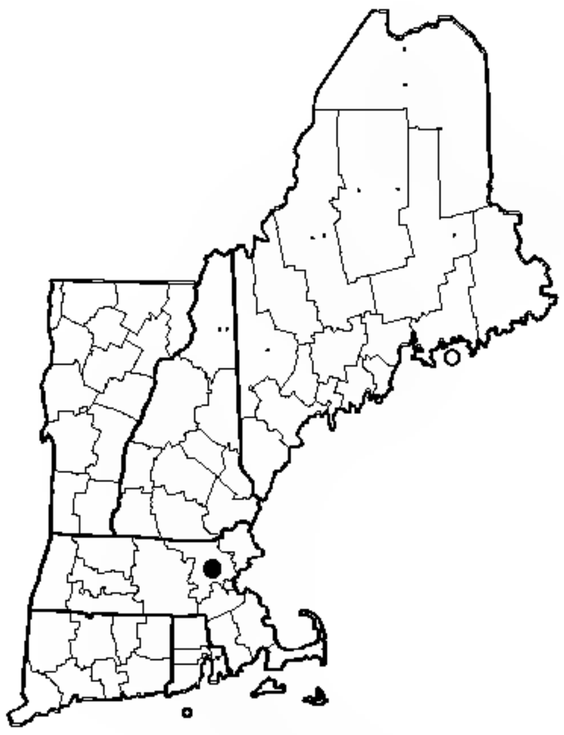


CENTAURIUM ERYTHRAEA

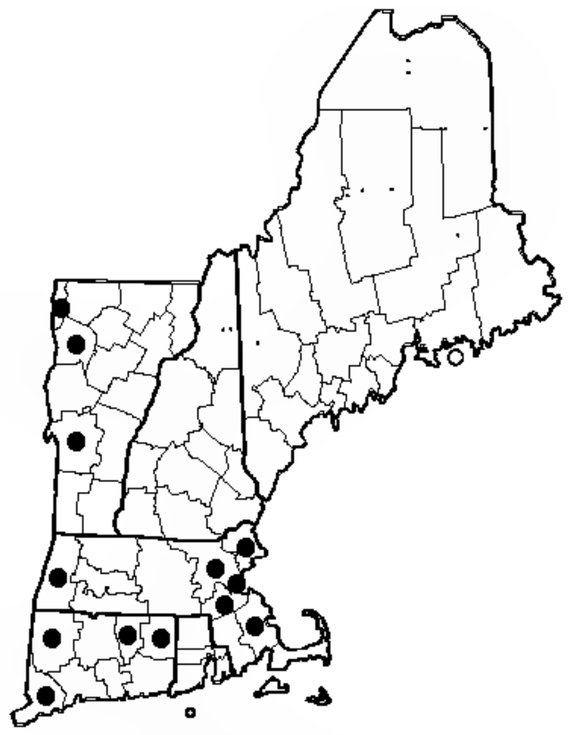


CENTAURIUM PULCHELLUM

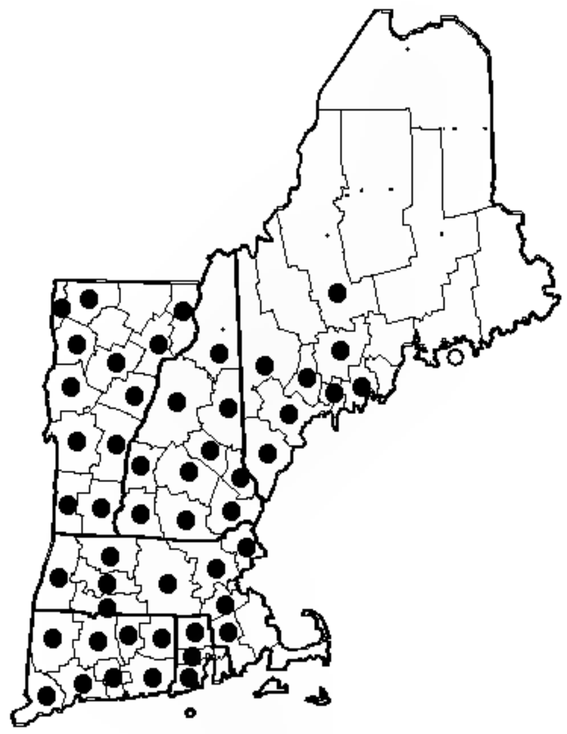
Figure 11 Distribution maps



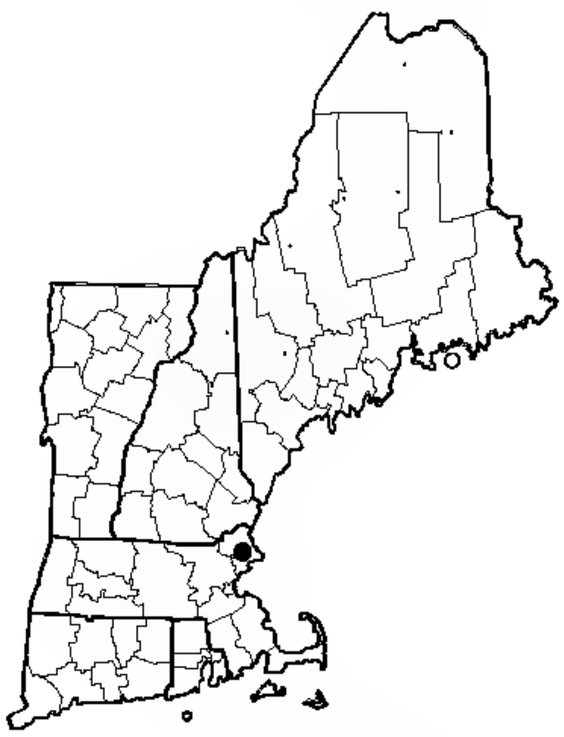
FRASERA ALBICAULIS
var *NITIDA*



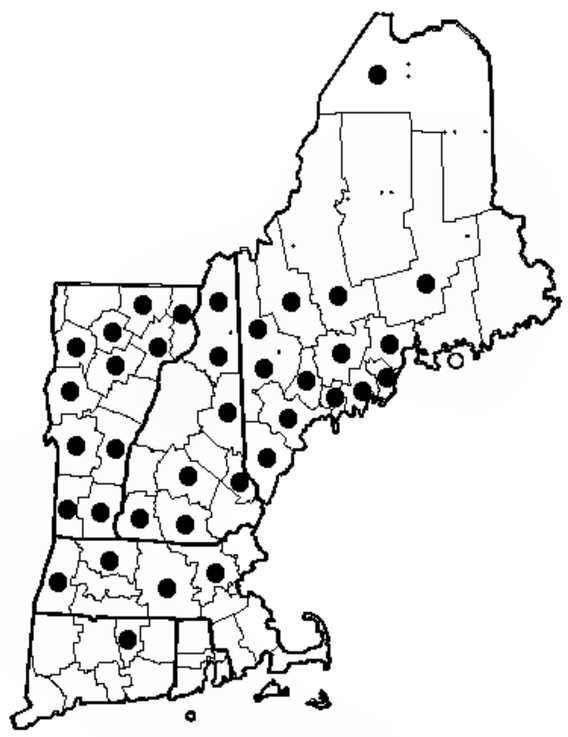
Gentiana andrewsii
var *andrewsii*



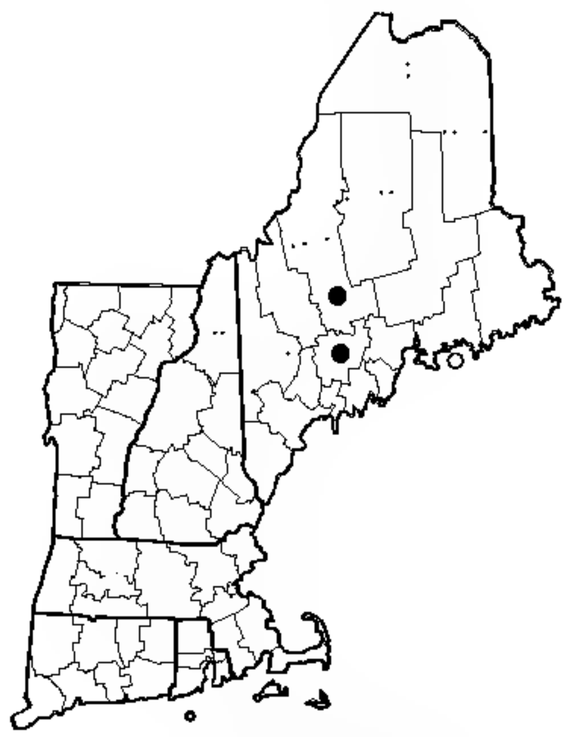
Gentiana clausa



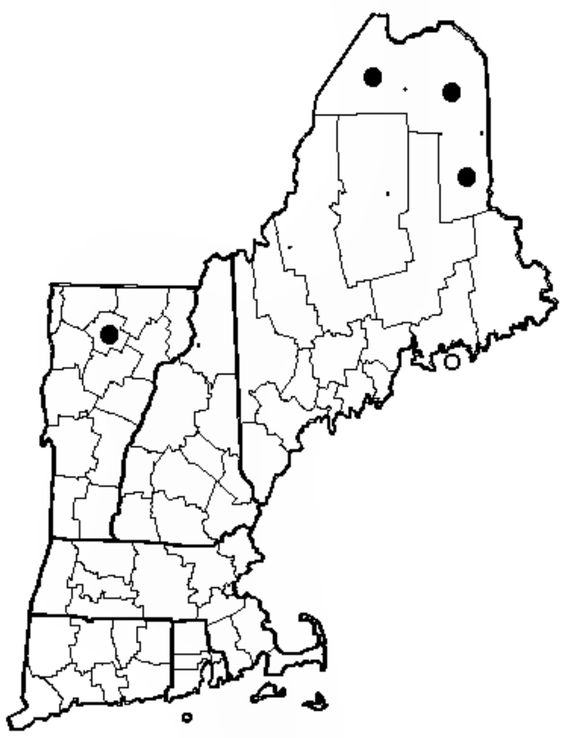
GENTIANA CRUCIATA



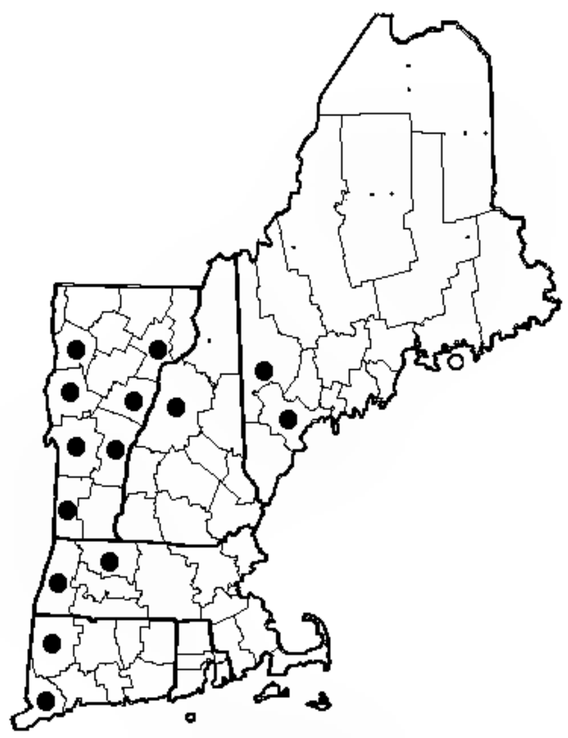
Gentiana linearis



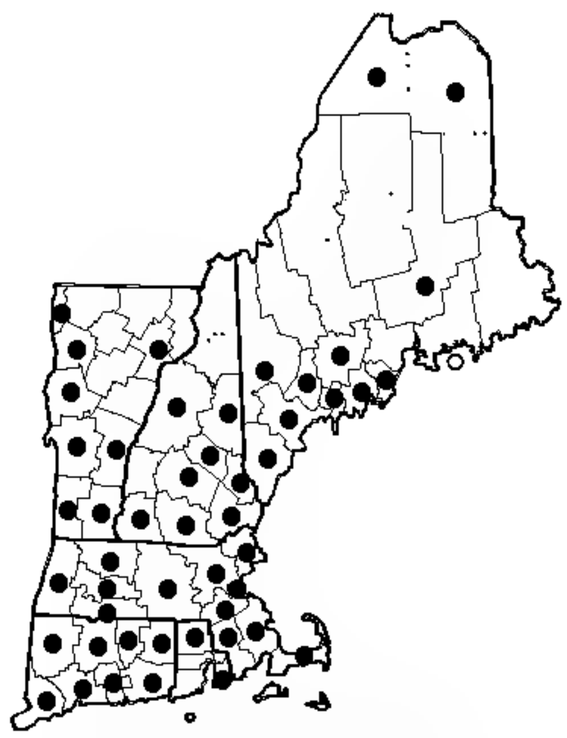
Gentiana rubricaulis



Gentianella amarella
subsp. *acuta*

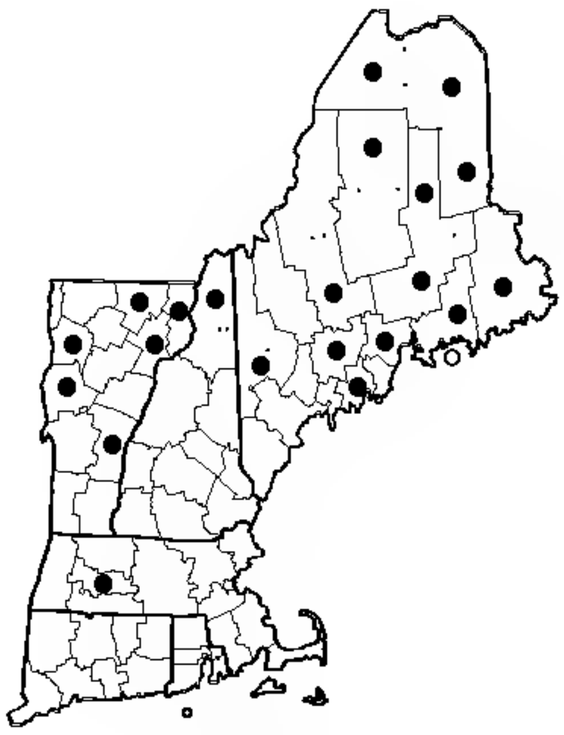


Gentianella quinquefolia
subsp. *quinquefolia*

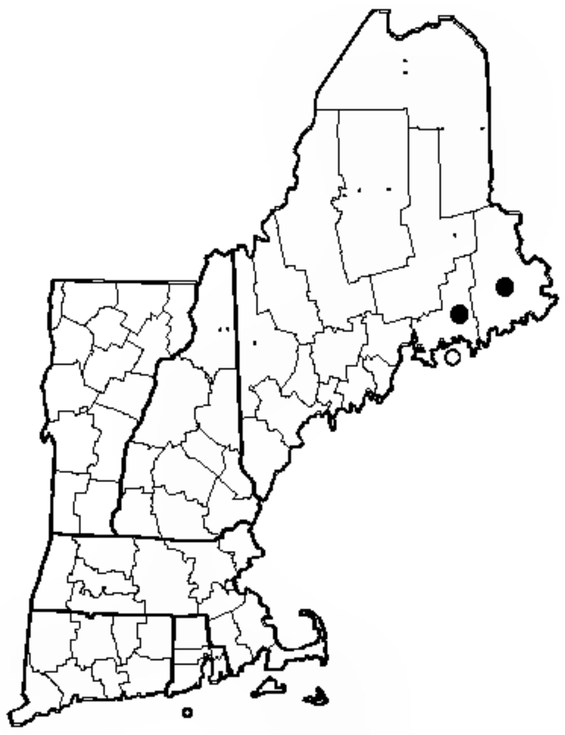


Gentianopsis crinita

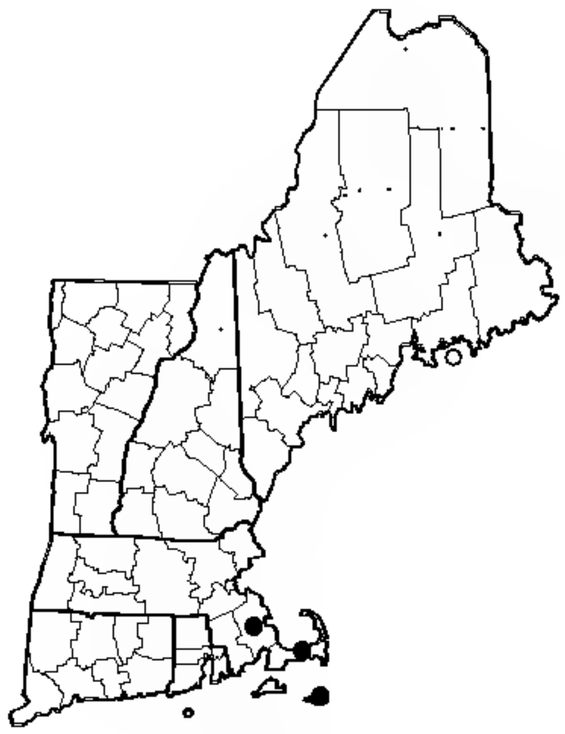
Figure 12 Distribution maps



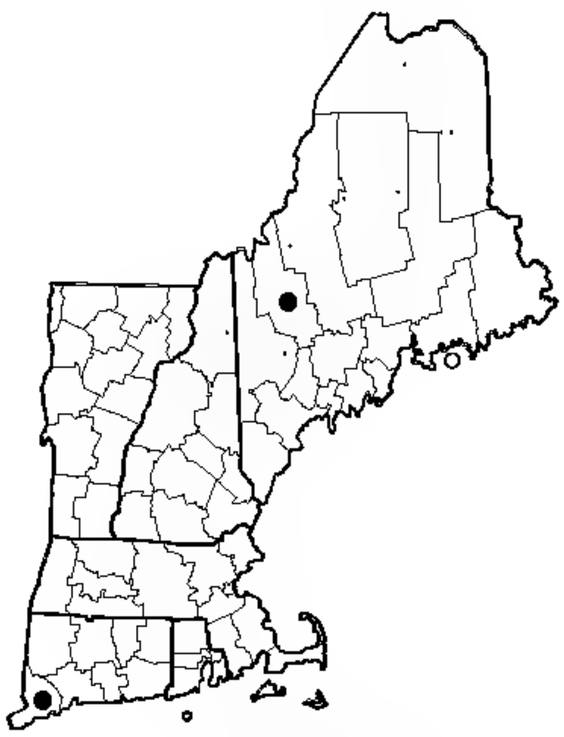
Halenia deflexa
var *deflexa*



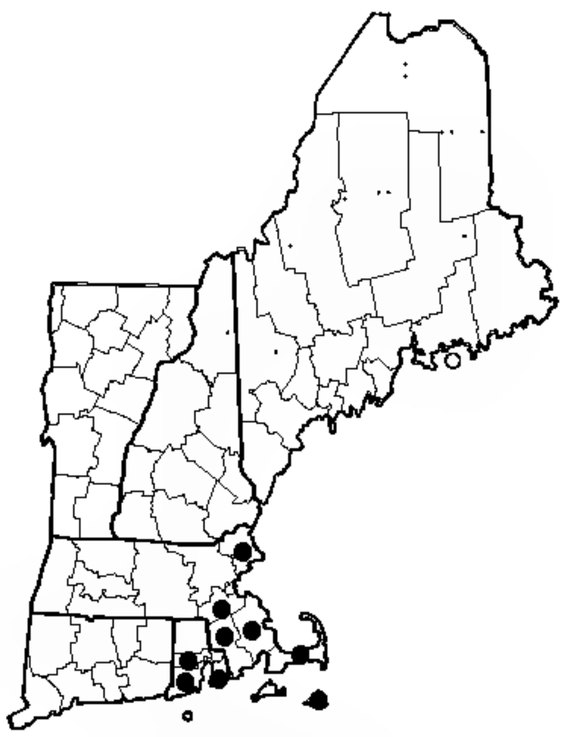
Lomatogonium rotatum
var *rotatum*



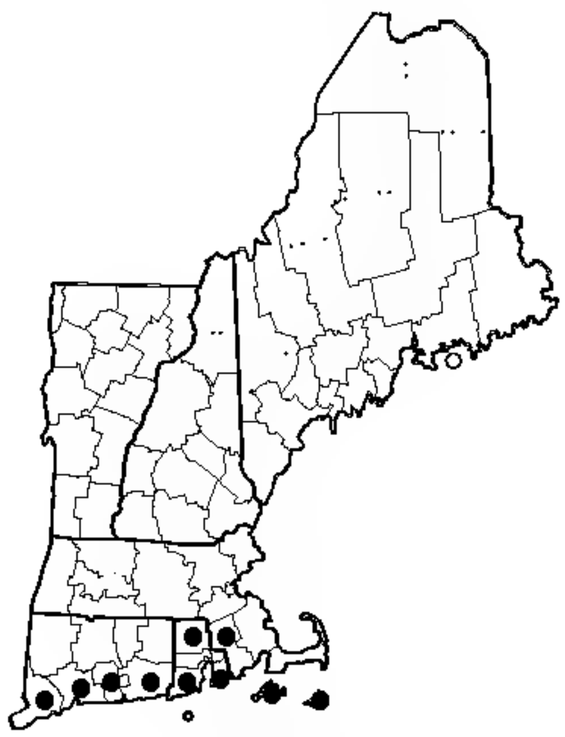
Sabatia campanulata



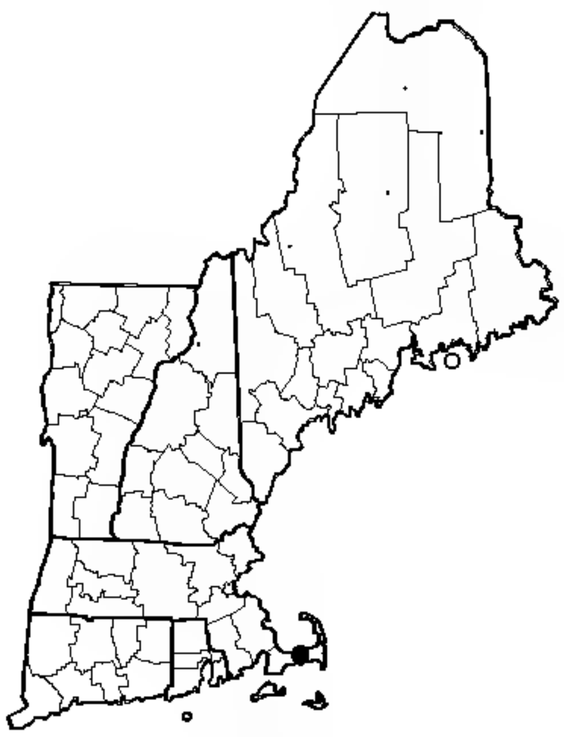
SABATIA CAMPESTRIS



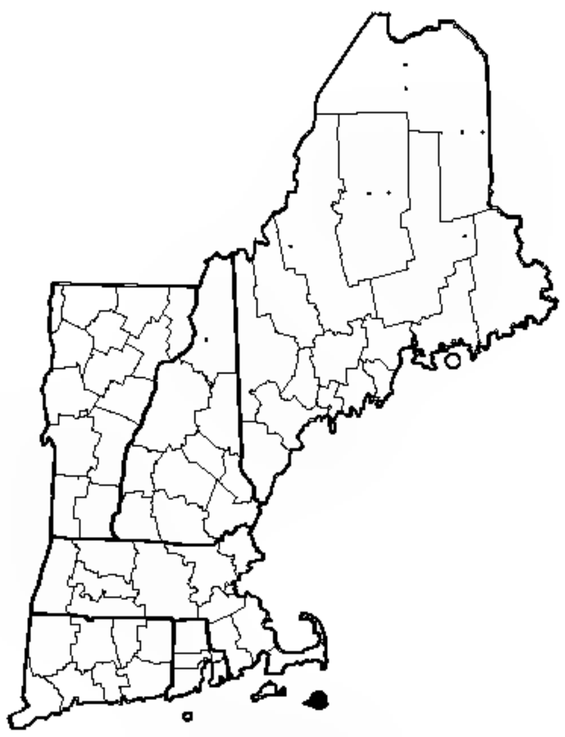
Sabatia kennedyana



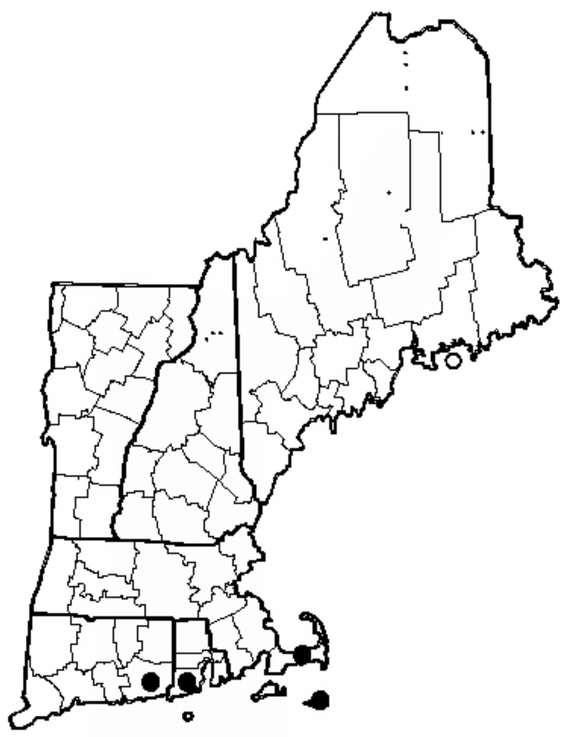
Sabatia stellaris



Sabatia campanulata
X *S kennedyana*

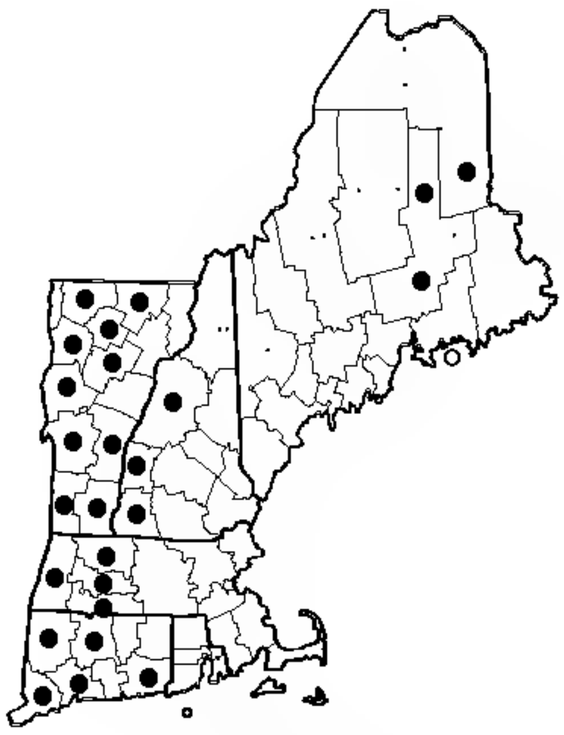


SCHENKIA SPICATA

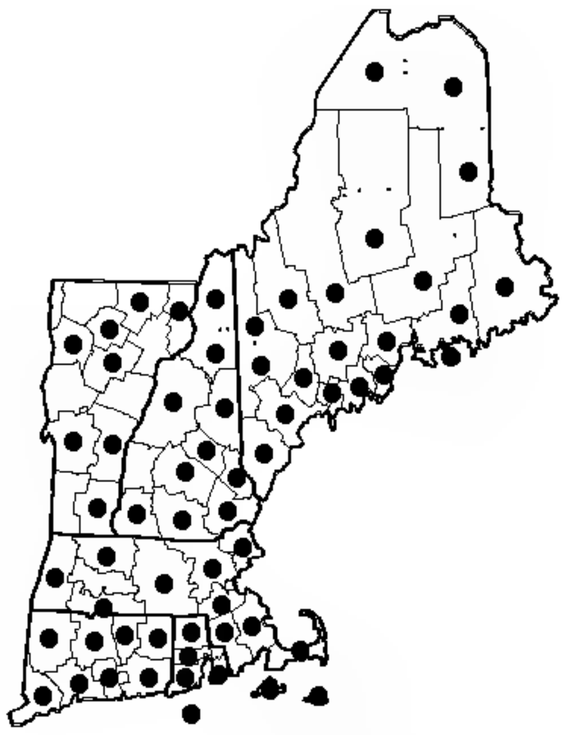


Hypericum adpressum

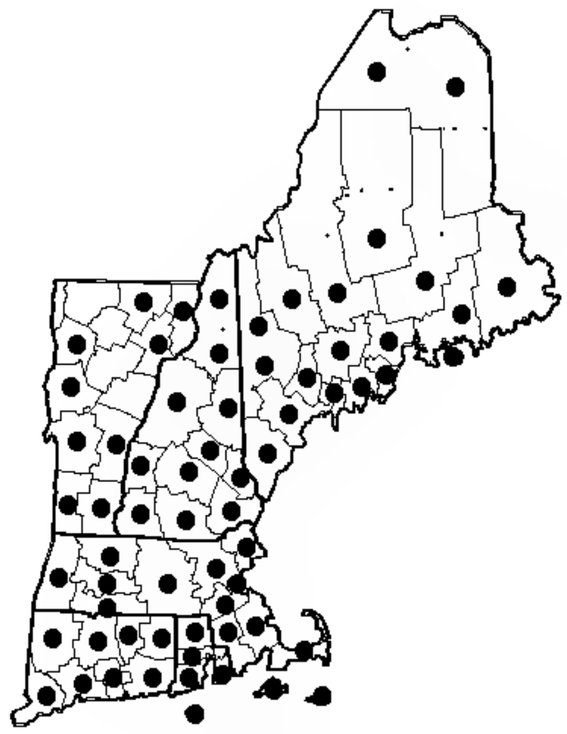
Figure 13 Distribution maps



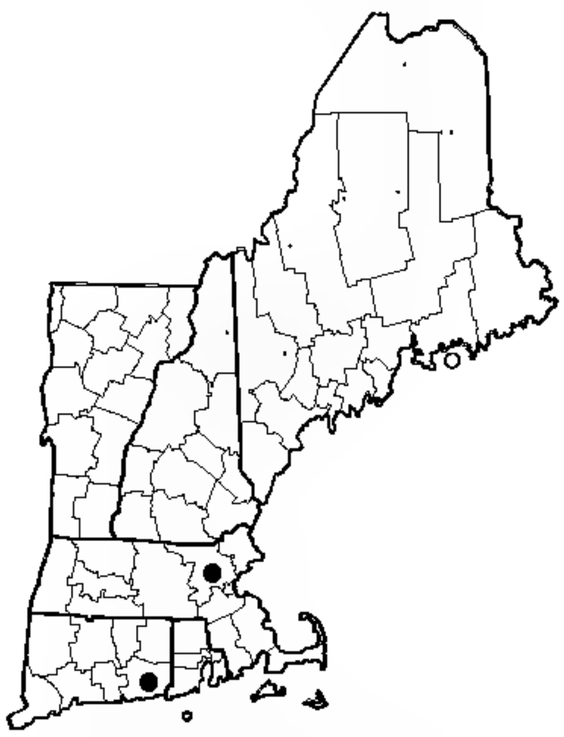
Hypericum ascyron
subsp. *pyramidatum*



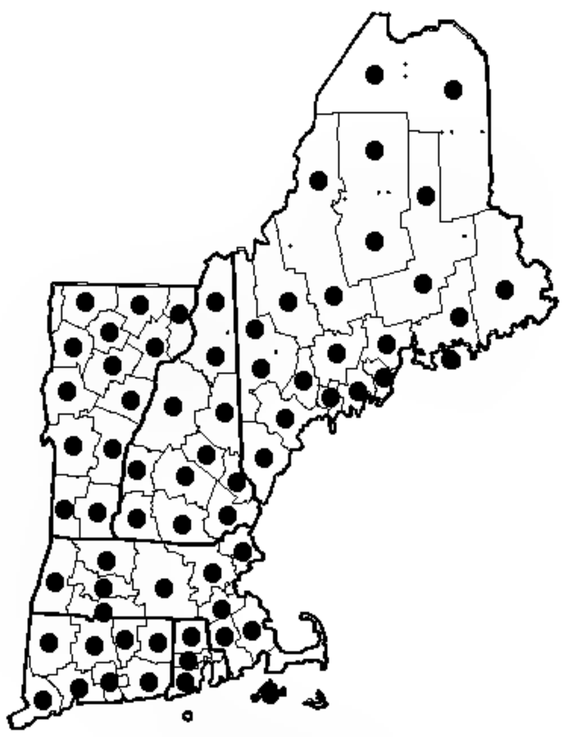
Hypericum boreale



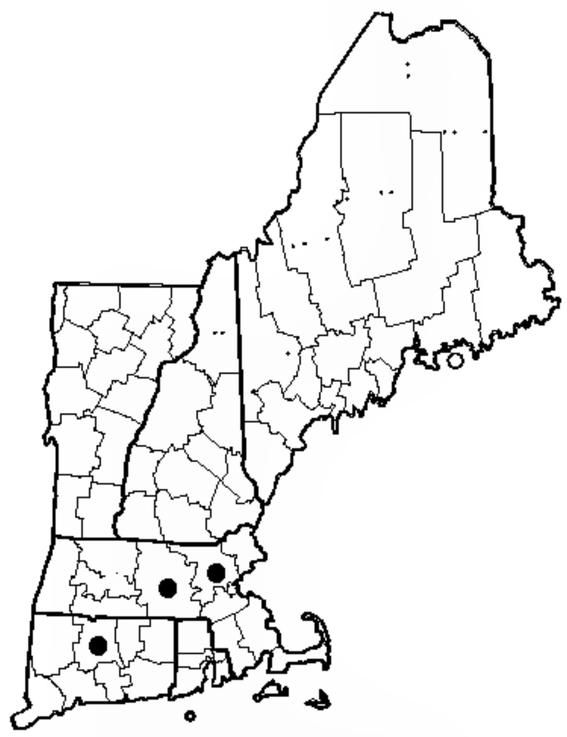
Hypericum canadense



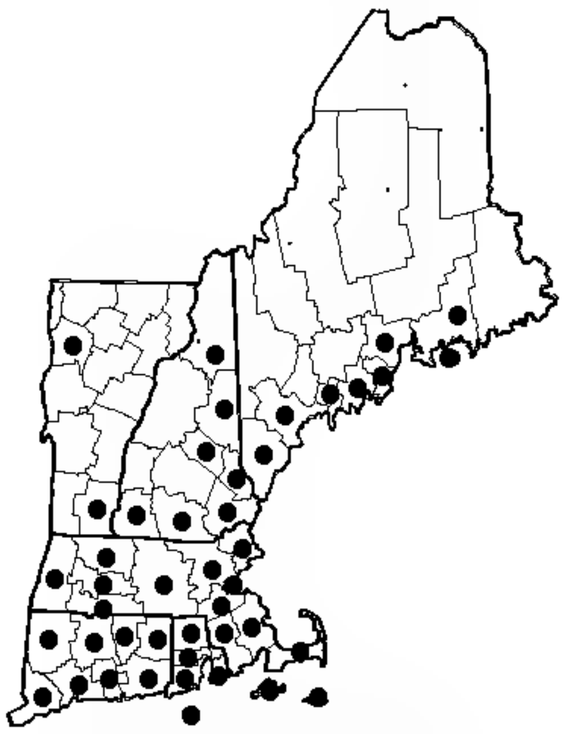
HYPERICUM DENSIFLORUM



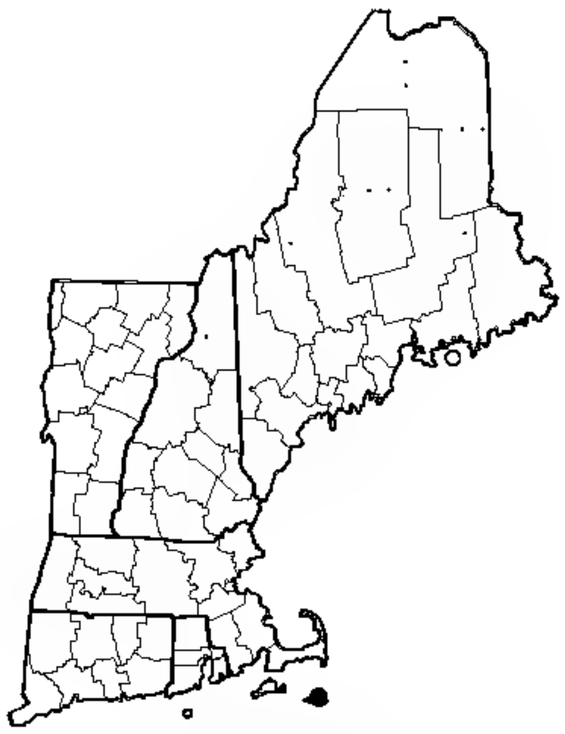
Hypericum ellipticum



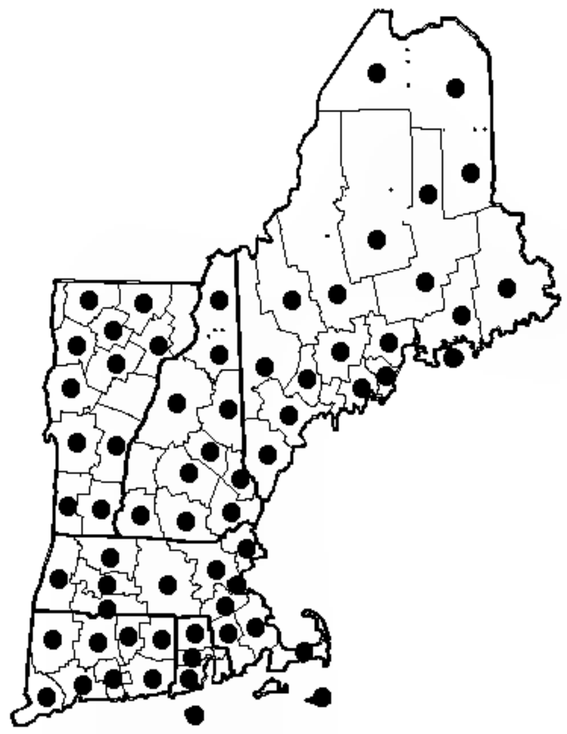
HYPERICUM FRONDOSUM



Hypericum gentianoides

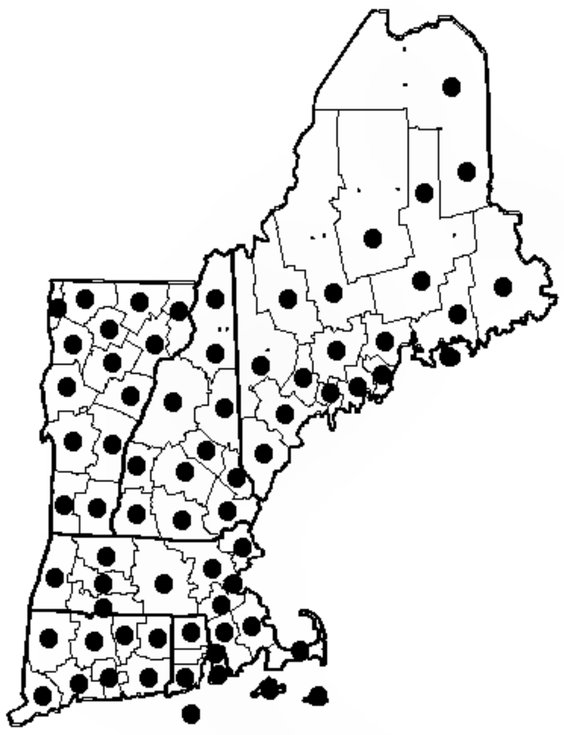


Hypericum hypericoides
subsp. *multicaule*

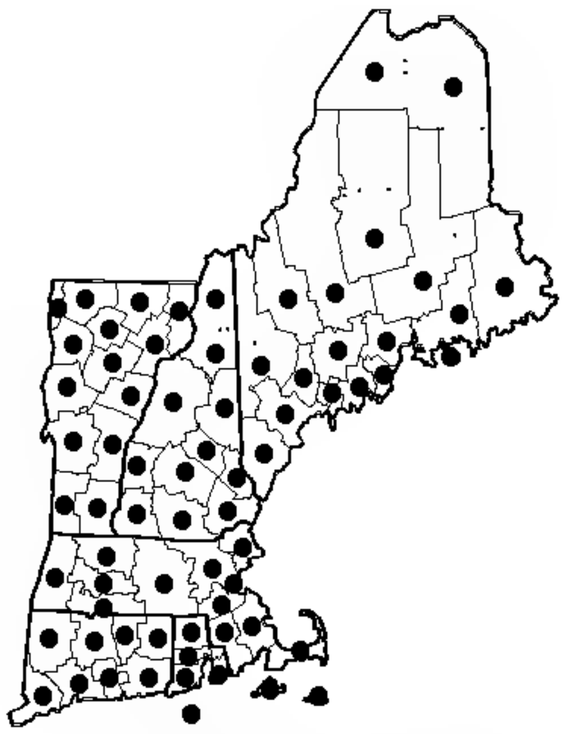


Hypericum majus

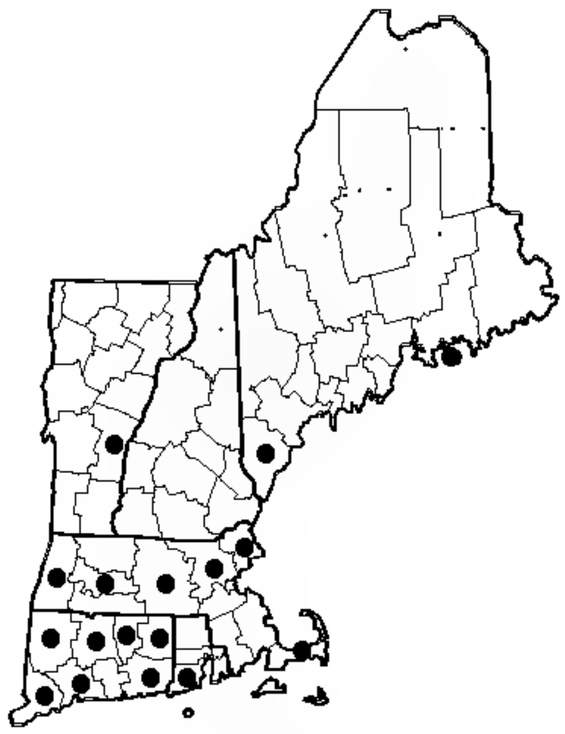
Figure 14 Distribution maps



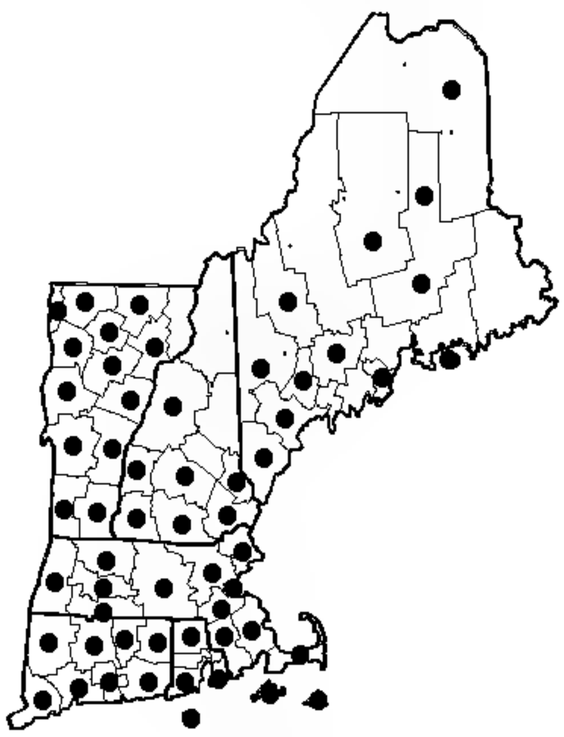
Hypericum mutilum
subsp. *mutilum*



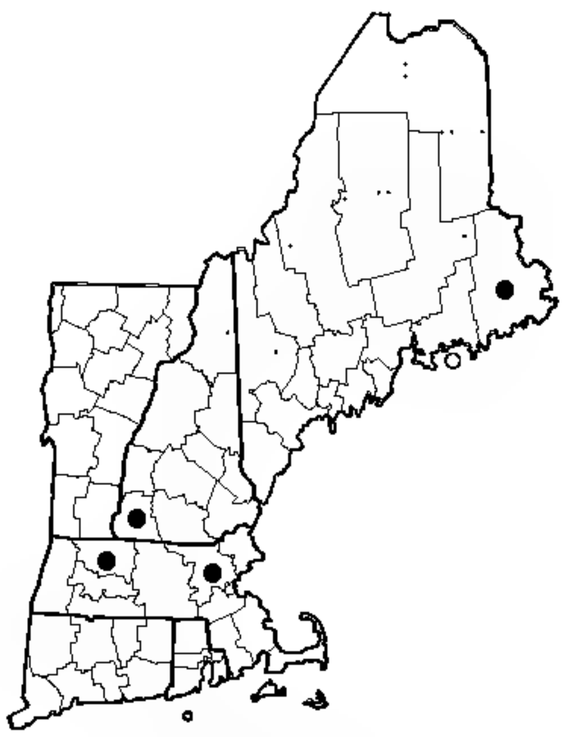
HYPERICUM PERFORATUM
subsp. *PERFORATUM*



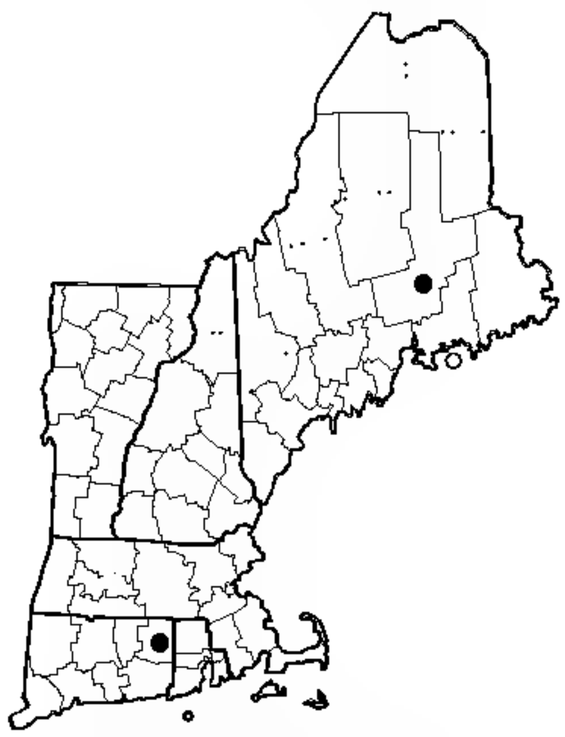
HYPERICUM PROLIFICUM



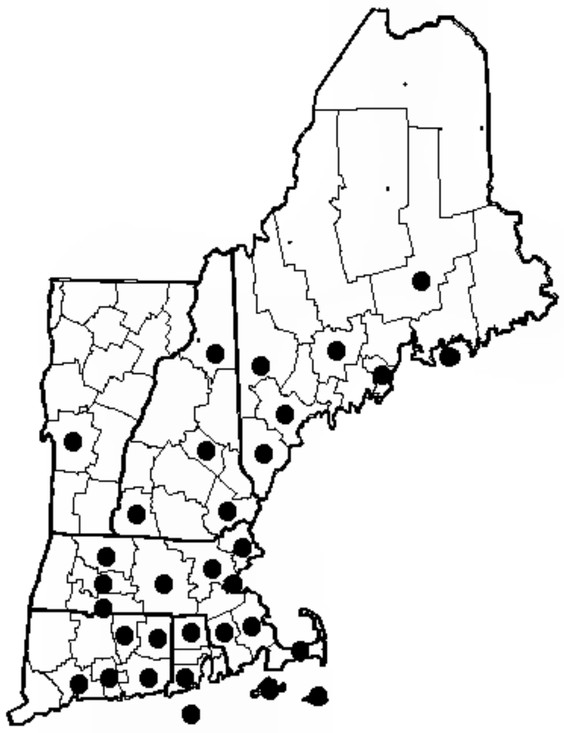
Hypericum punctatum



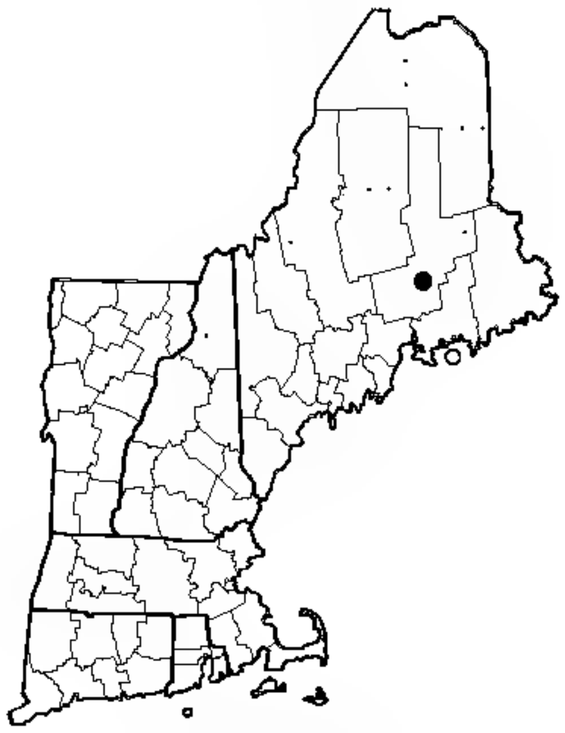
Hypericum canadense
X *H. majus*



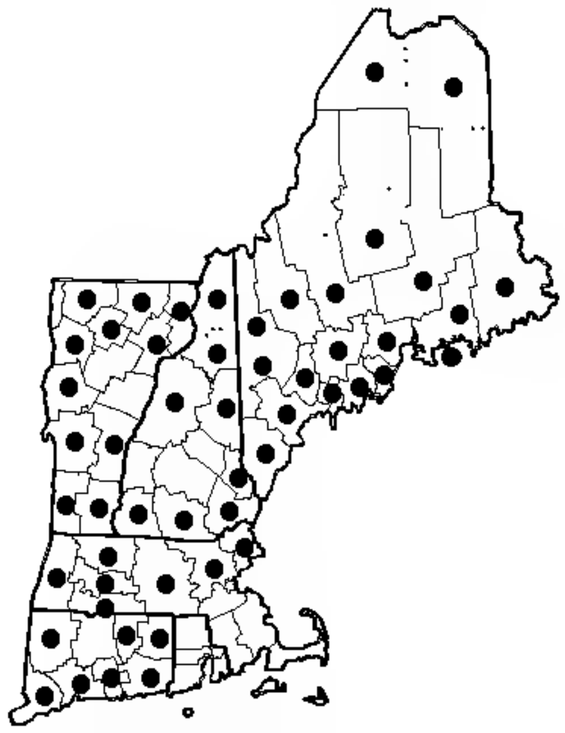
Hypericum canadense
X *H. mutilum* subsp. *mutilum*



Hypericum X *dissimulatum*

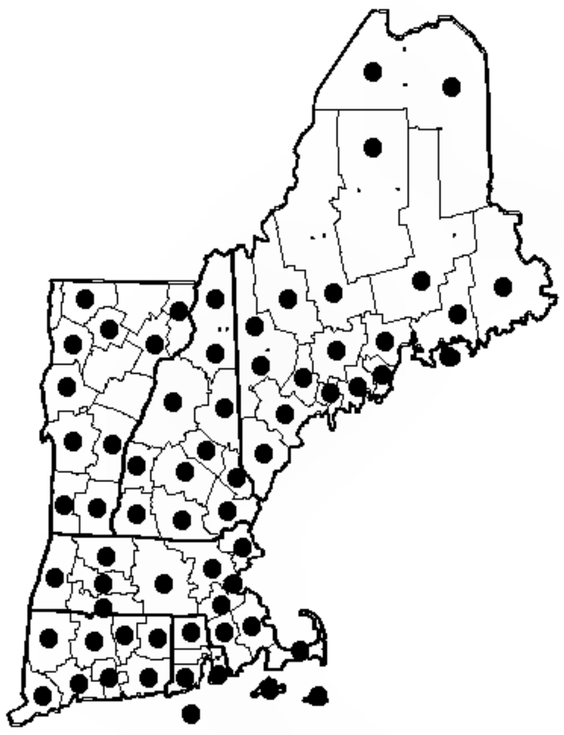


Hypericum majus
X *H. mutilum* subsp. *mutilum*

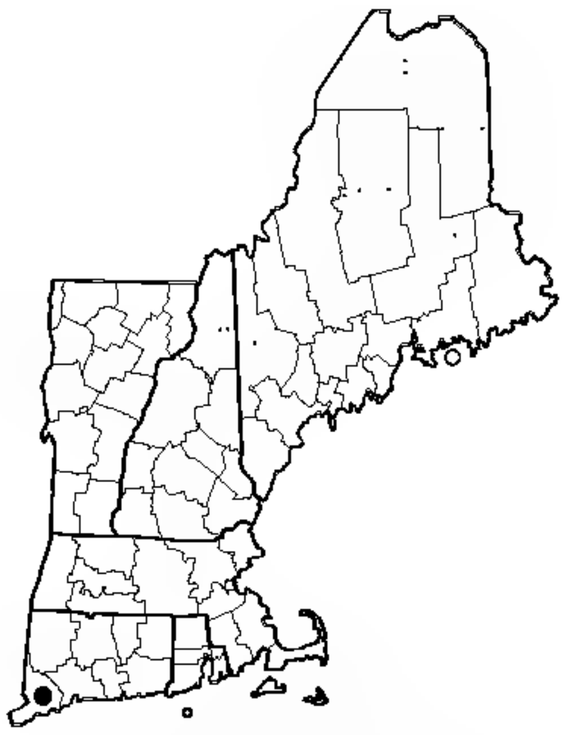


Triadenum fraseri

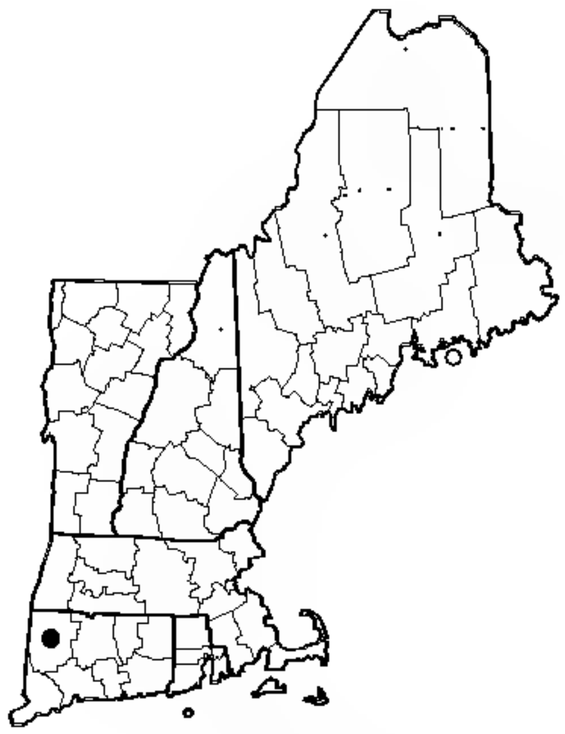
Figure 15 Distribution maps



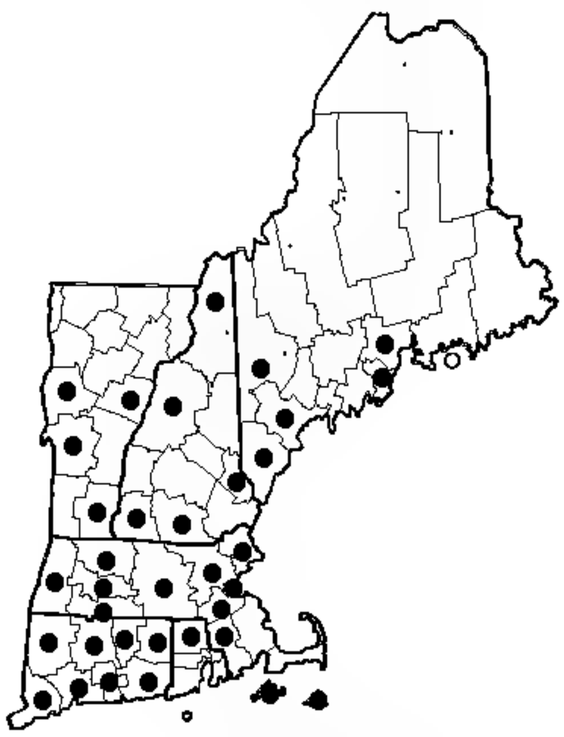
Triadenum virginicum



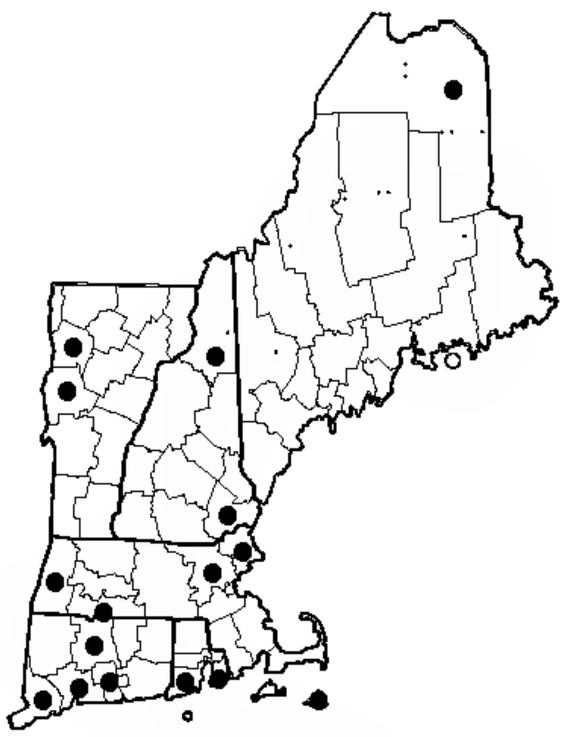
ABELMOSCHUS ESCULENTUS



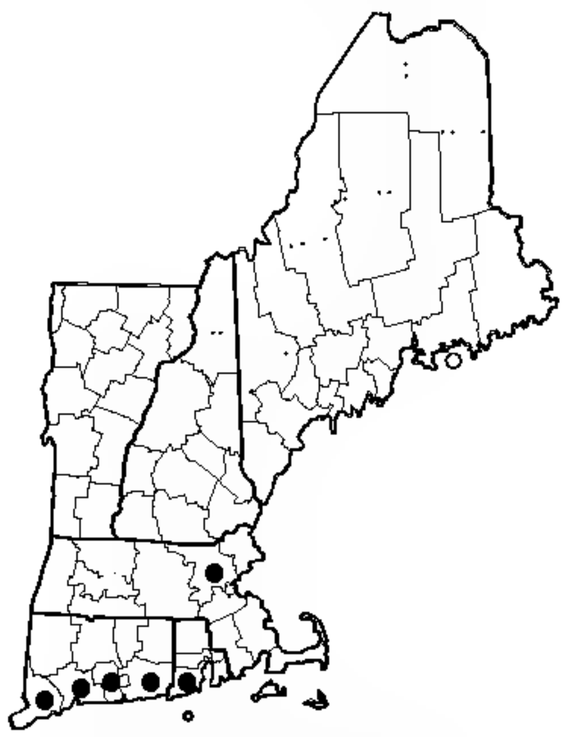
ABUTILON PICTUM



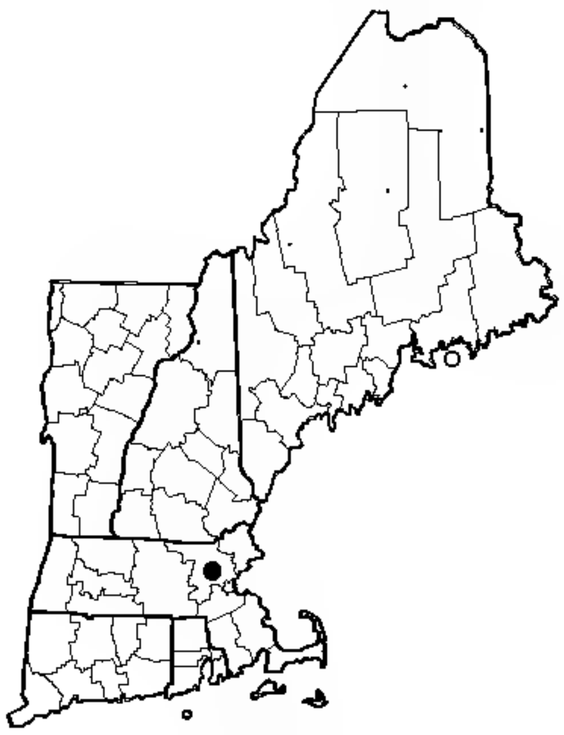
ABUTILON THEOPHRASTI



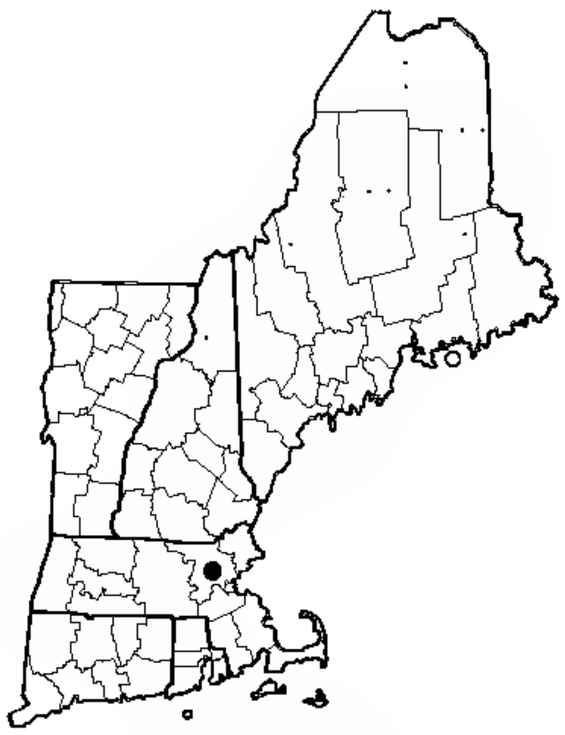
ALCEA ROSEA



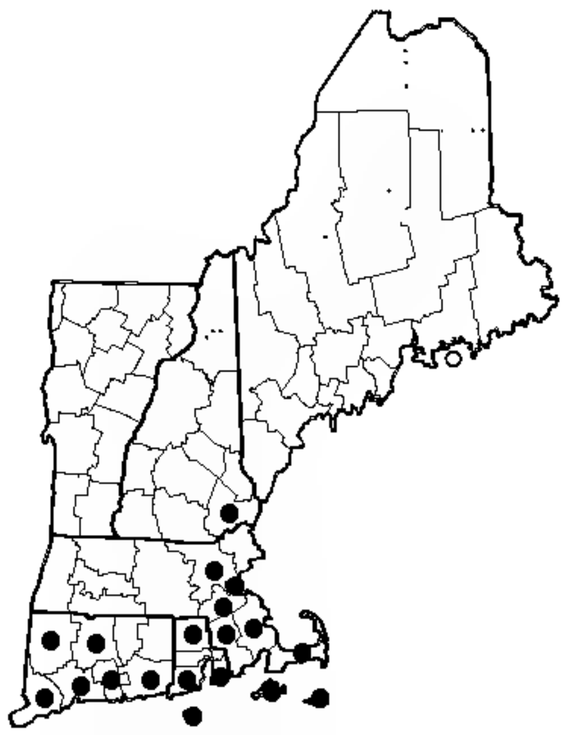
ALTHAEA OFFICINALIS



ANODA CRISTATA

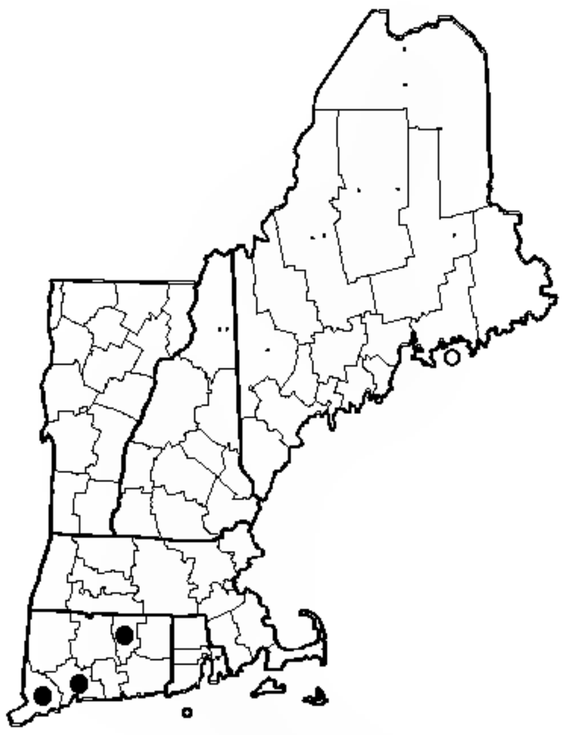


GOSSYPIUM HIRSUTUM

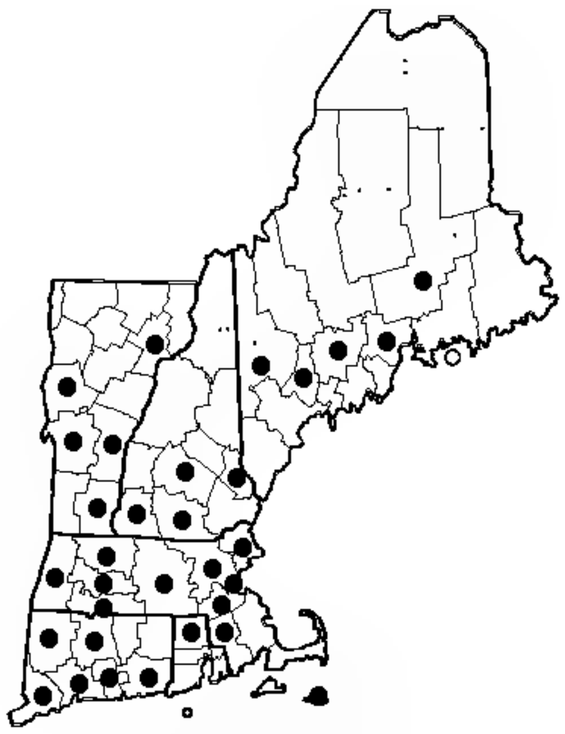


Hibiscus moscheutos subsp. *moscheutos*

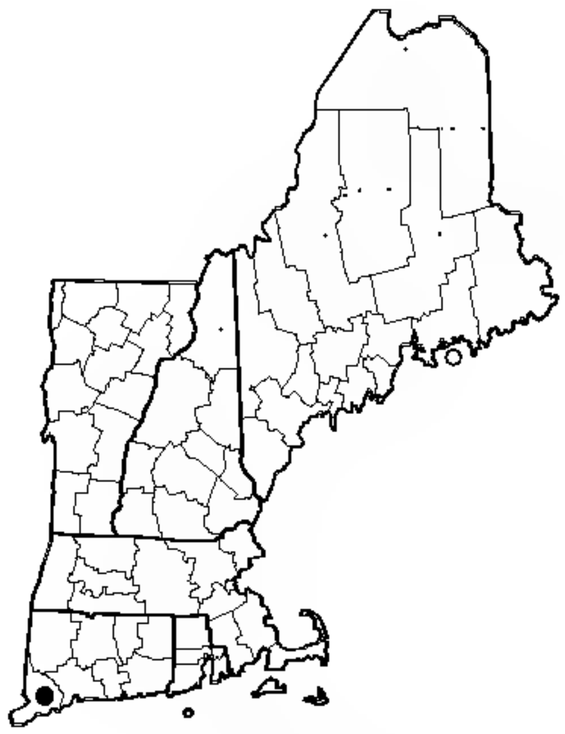
Figure 16 Distribution maps



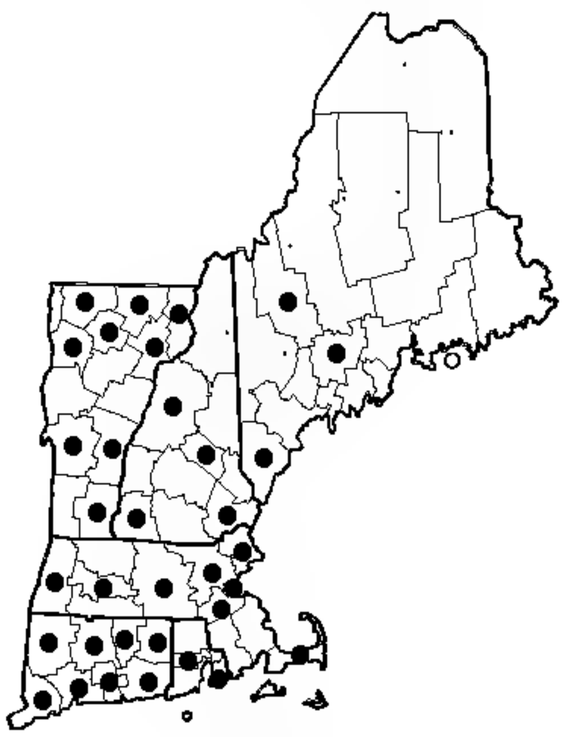
HIBISCUS SYRIACUS



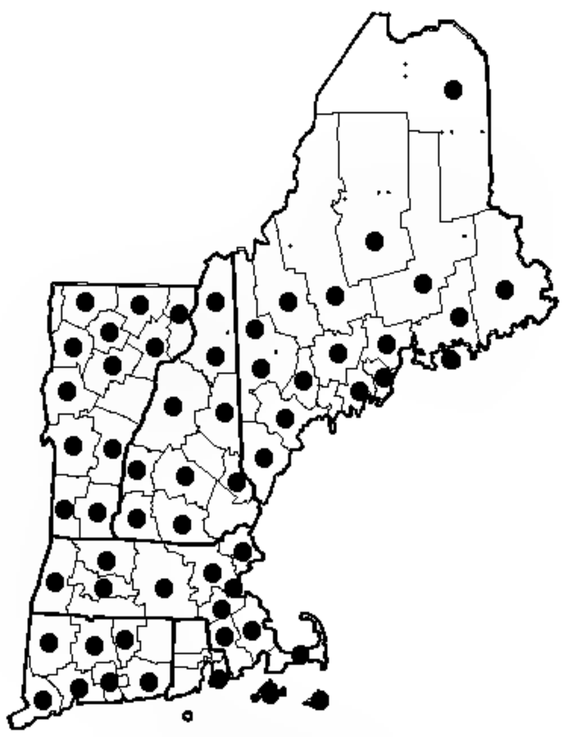
HIBISCUS TRIONUM



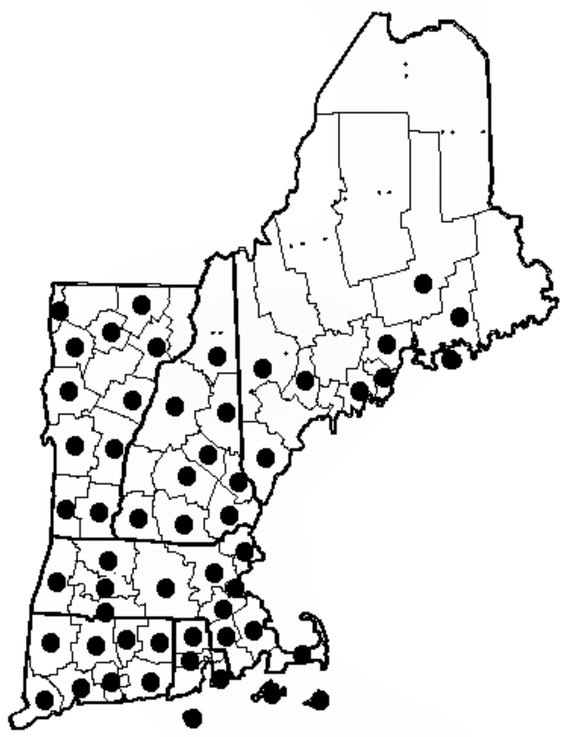
LAVATERA TRIMESTRIS



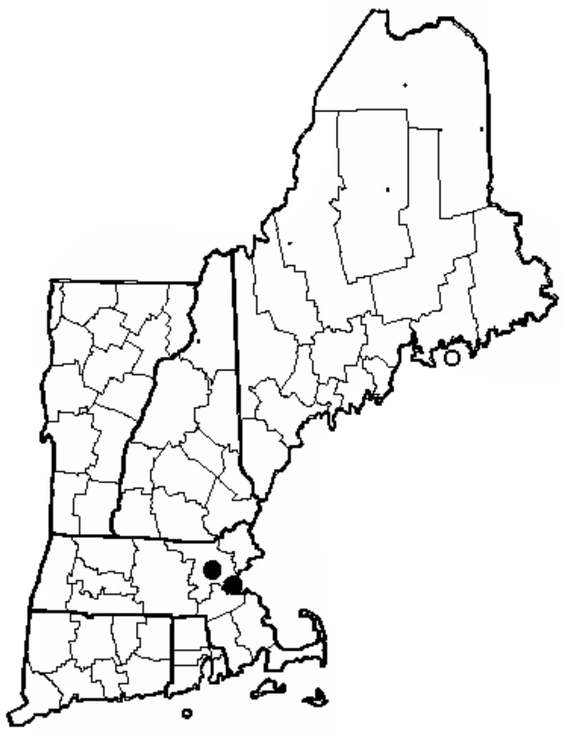
MALVA ALCEA



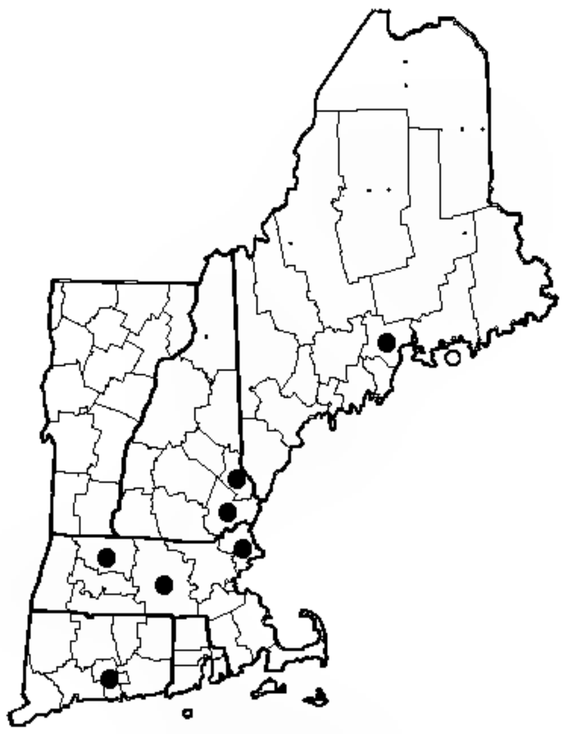
MALVA MOSCHATA



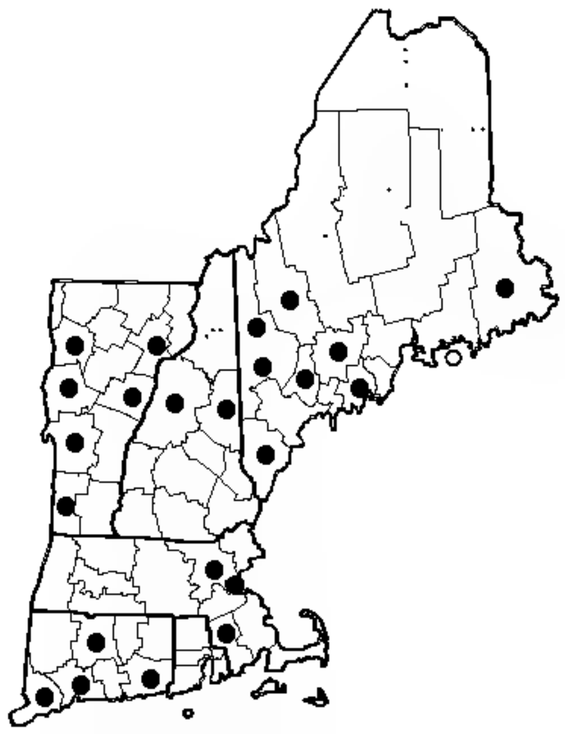
MALVA NEGLECTA



MALVA PARVIFLORA

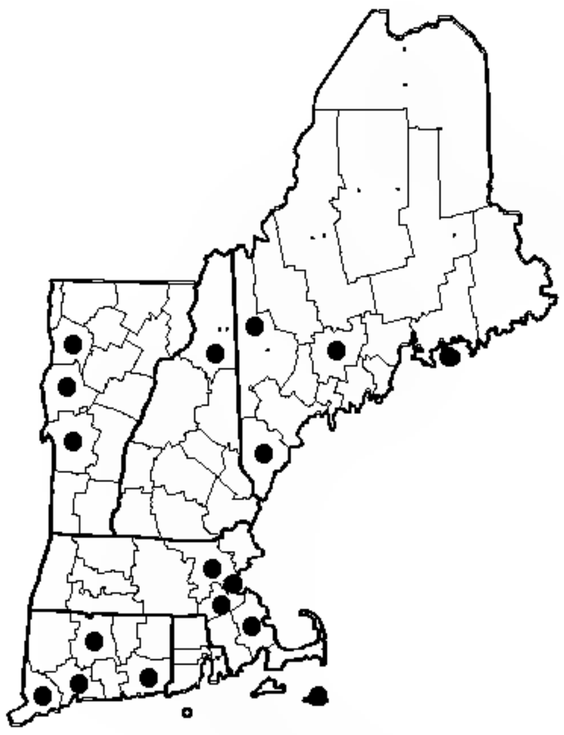


MALVA PUSILLA

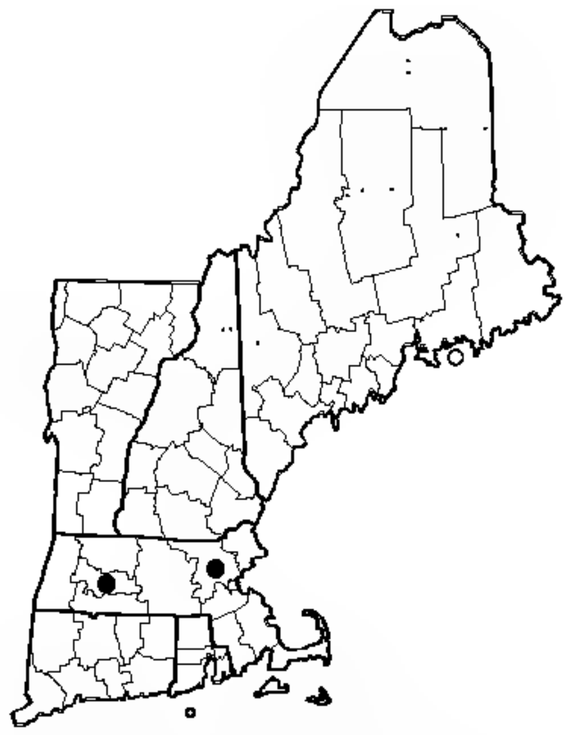


MALVA SYLVESTRIS

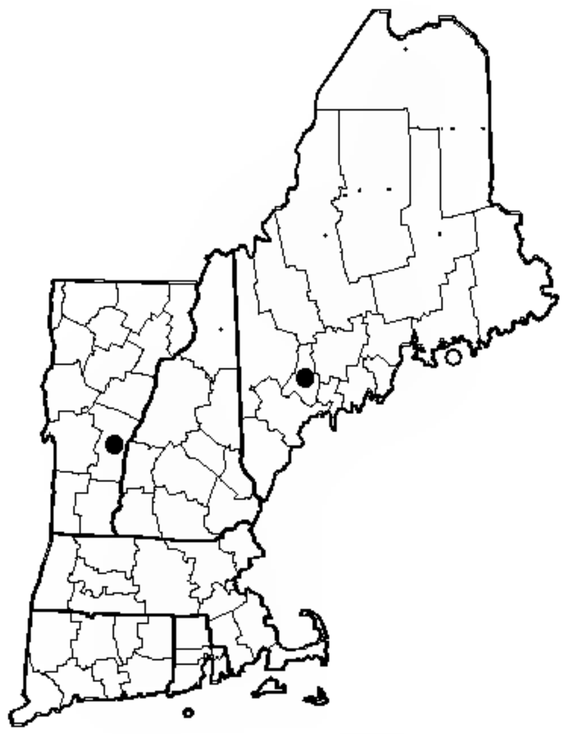
Figure 17 Distribution maps



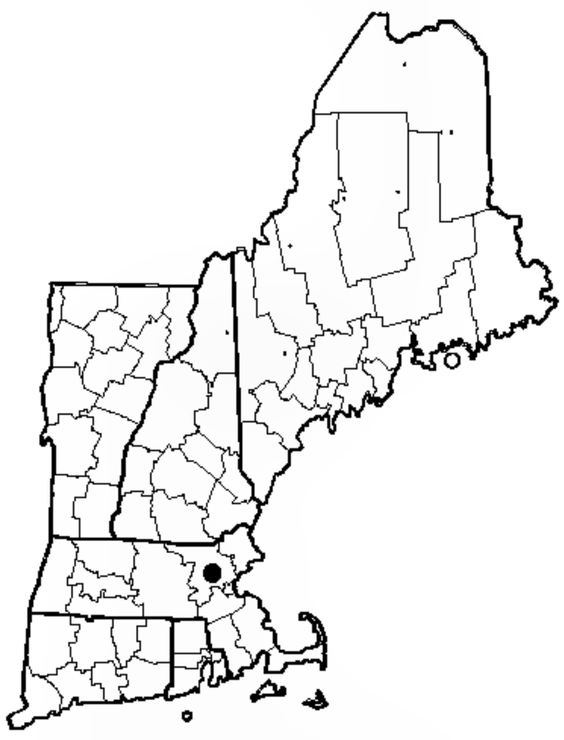
MALVA VERTICILLATA



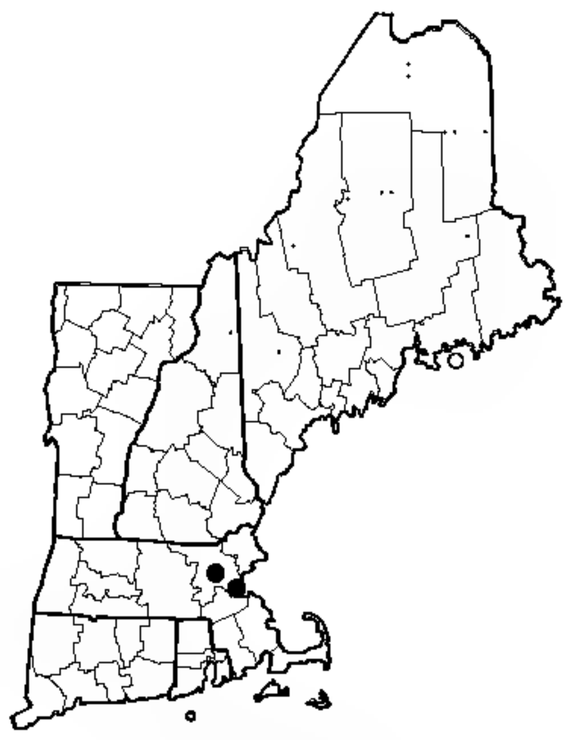
MALVASTRUM COROMANDELIANUM



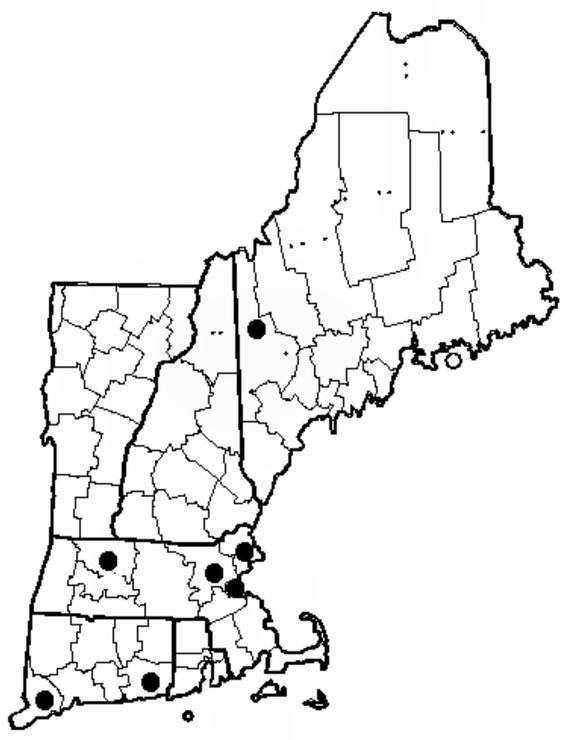
NAPAEA DIOICA



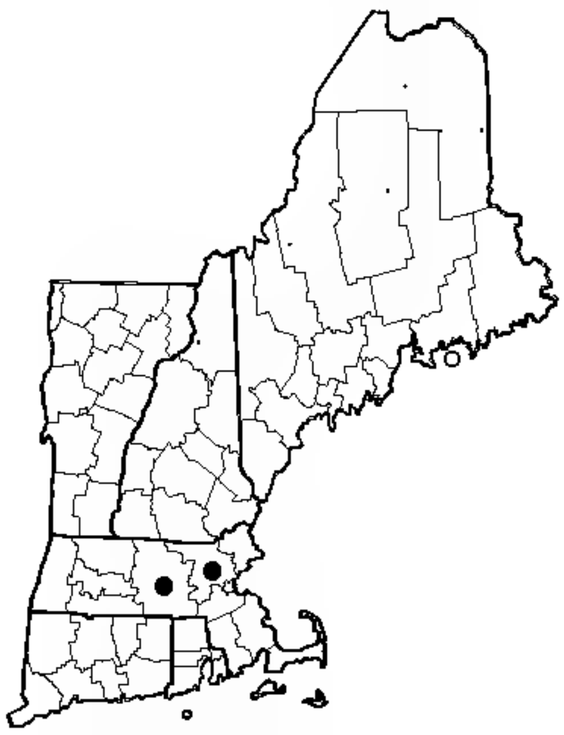
PSEUDABUTILON STUCKERTII



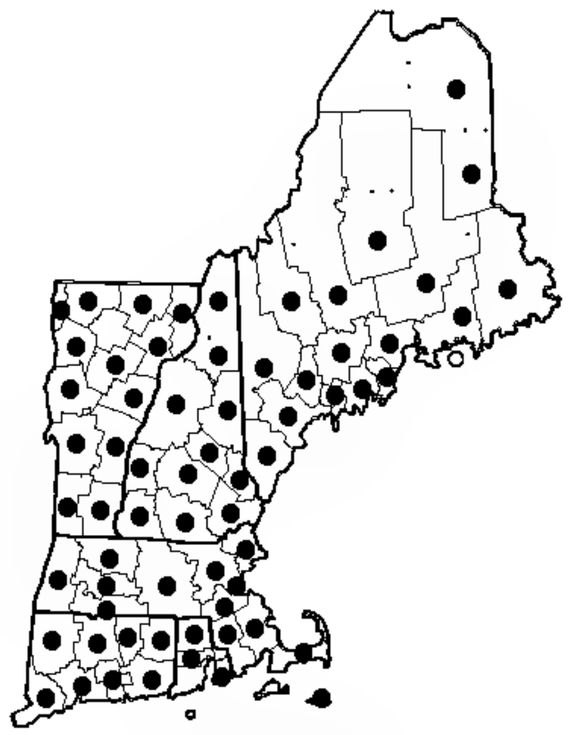
SIDA HERMAPHRODITA



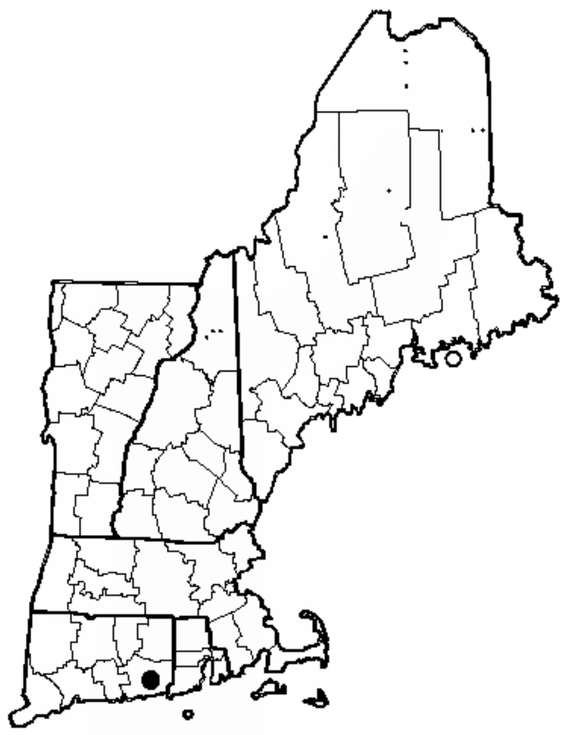
SIDA SPINOSA



SPHAERALCEA MENDOCINA

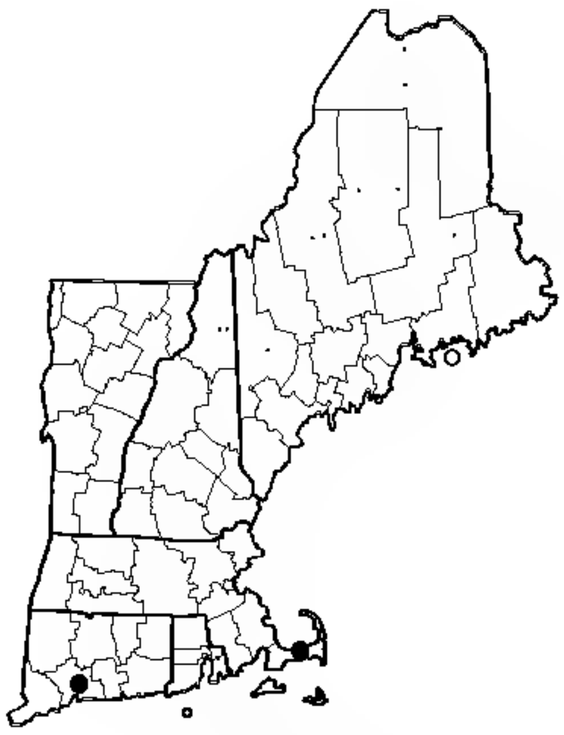


Tilia americana
var *americana*

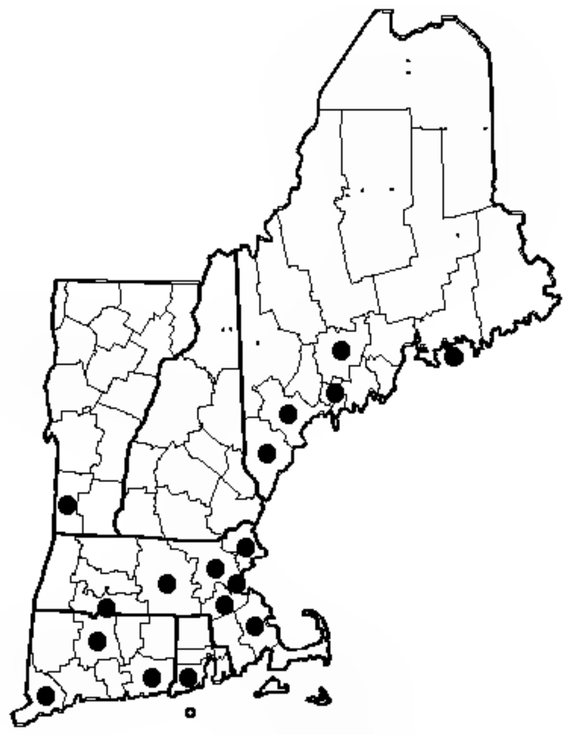


TILIA AMERICANA
var *CAROLINIANA*

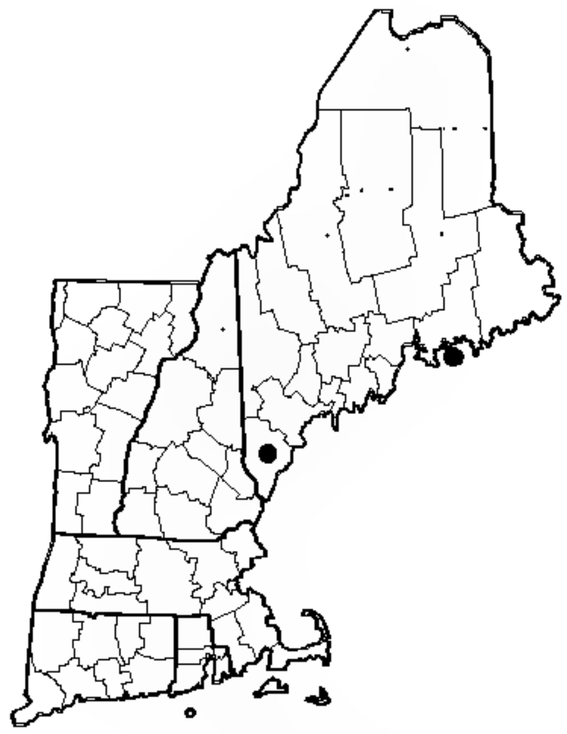
Figure 18 Distribution maps



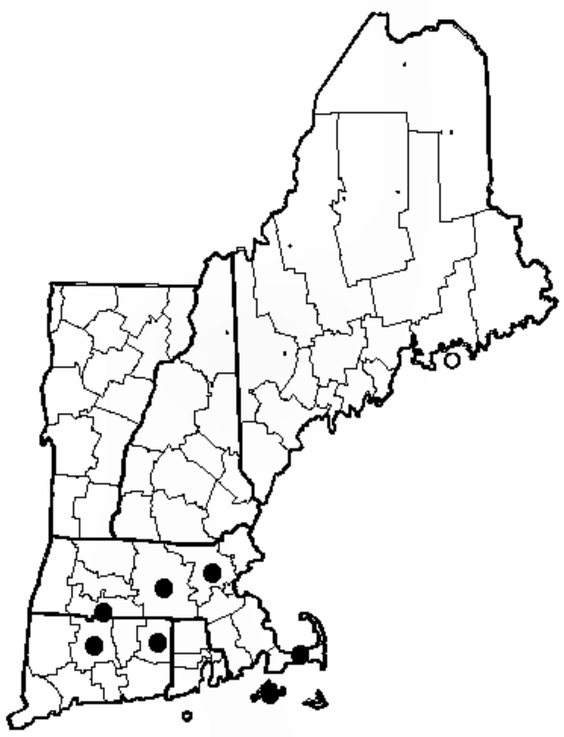
TILIA AMERICANA
var *HETEROPHYLLA*



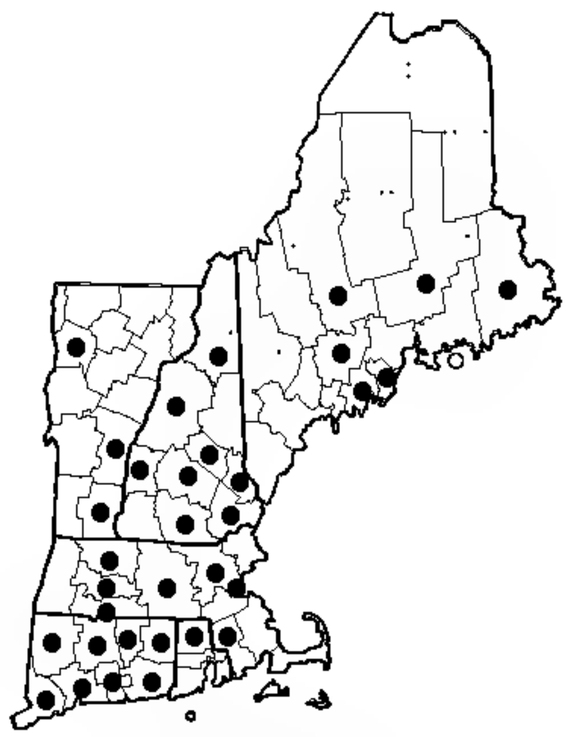
TILIA CORDATA



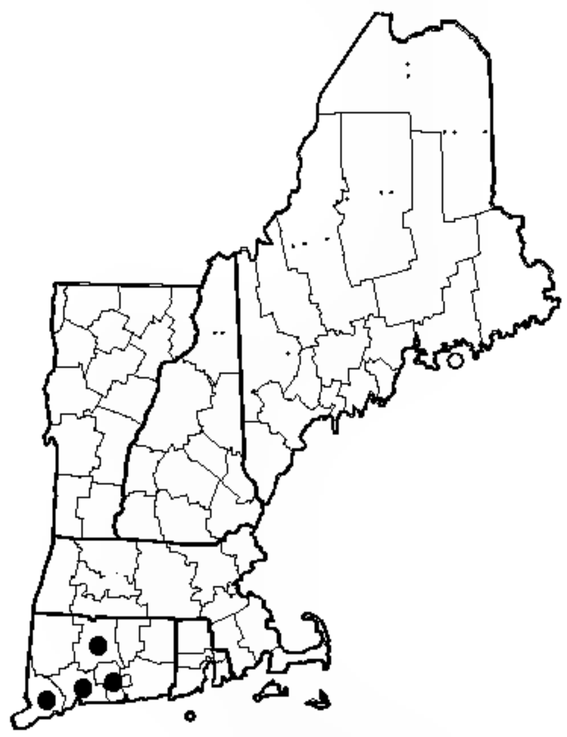
TILIA PLATYPHYLLOS



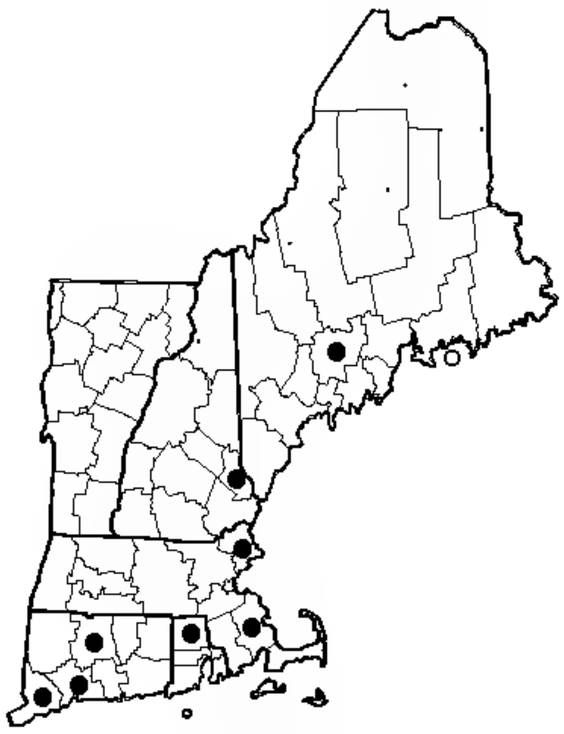
TILIA X EUROPAEA



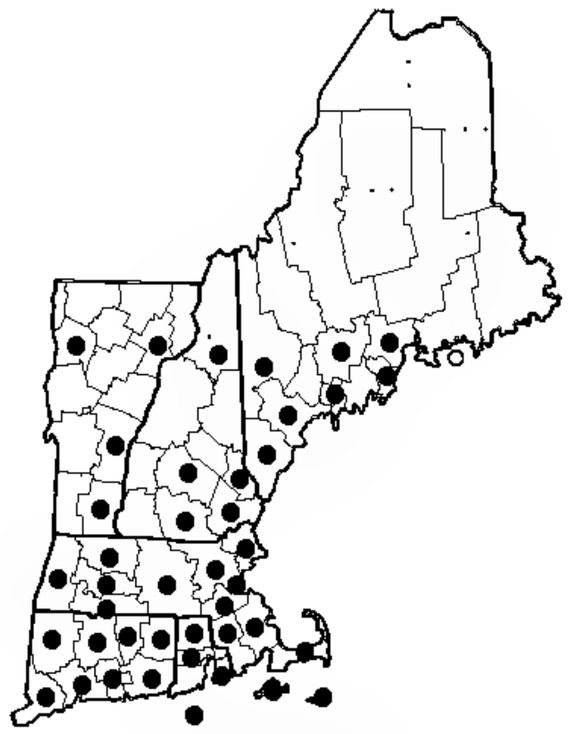
Podostemum ceratophyllum



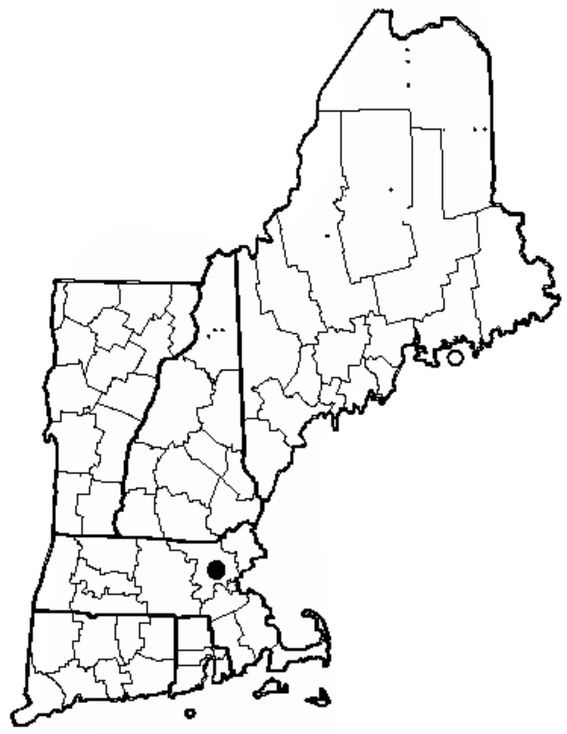
CAPSICUM ANNUUM
var *GLABRIUSCULUM*



DATURA INOXIA

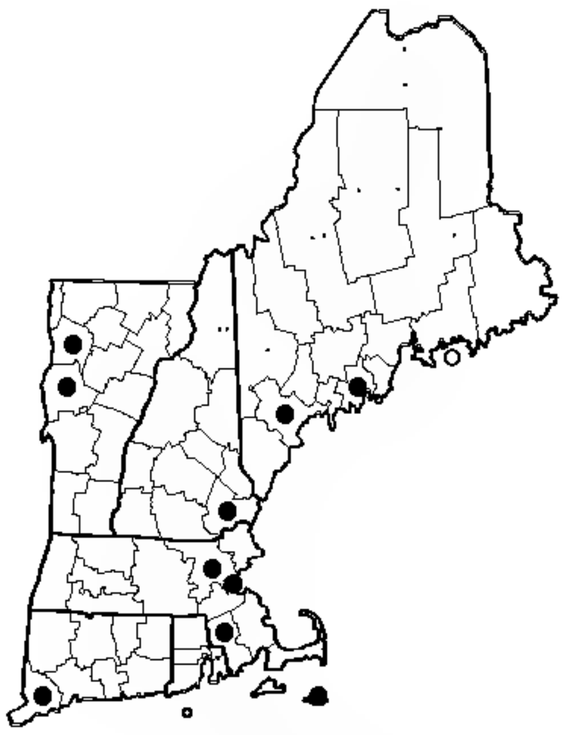


DATURA STRAMONIUM

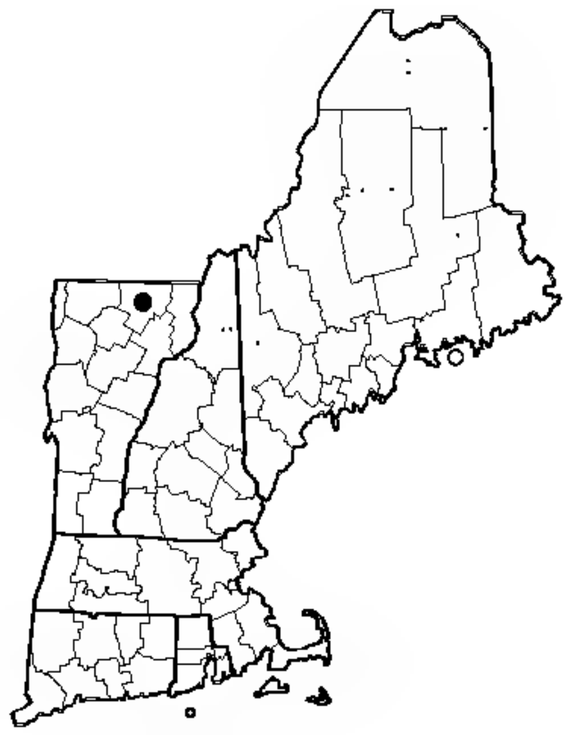


DATURA WRIGHTII

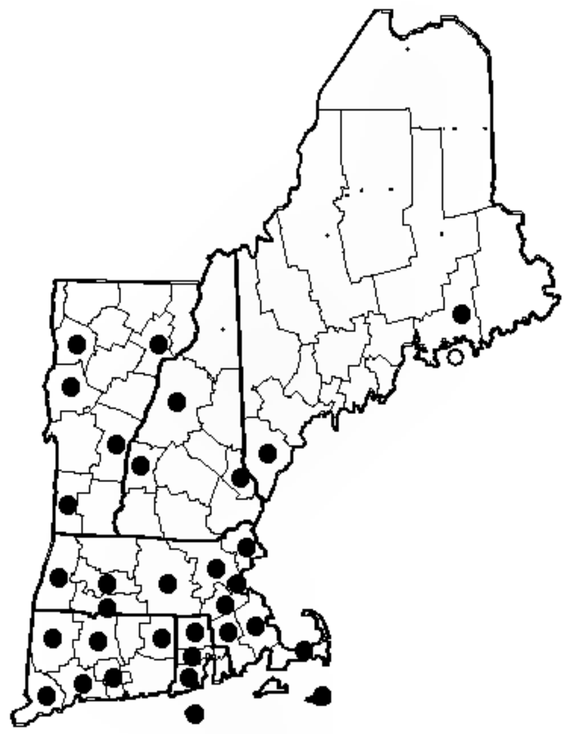
Figure 19 Distribution maps



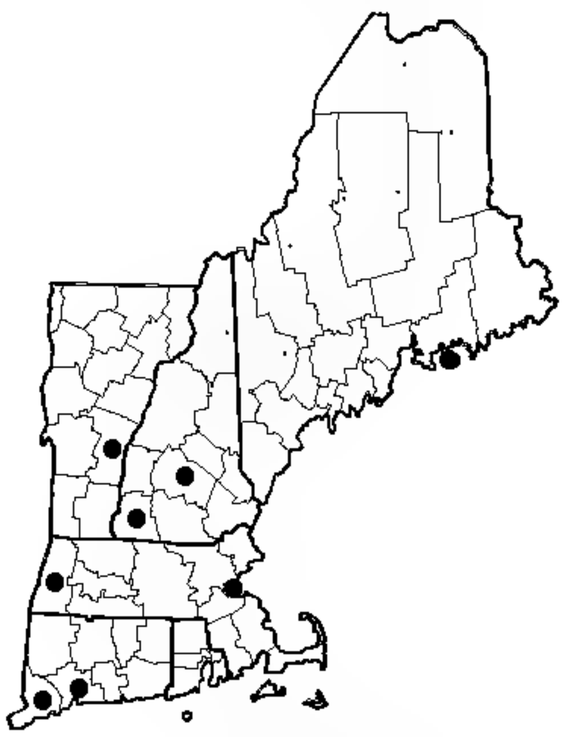
HYOSCYAMUS NIGER



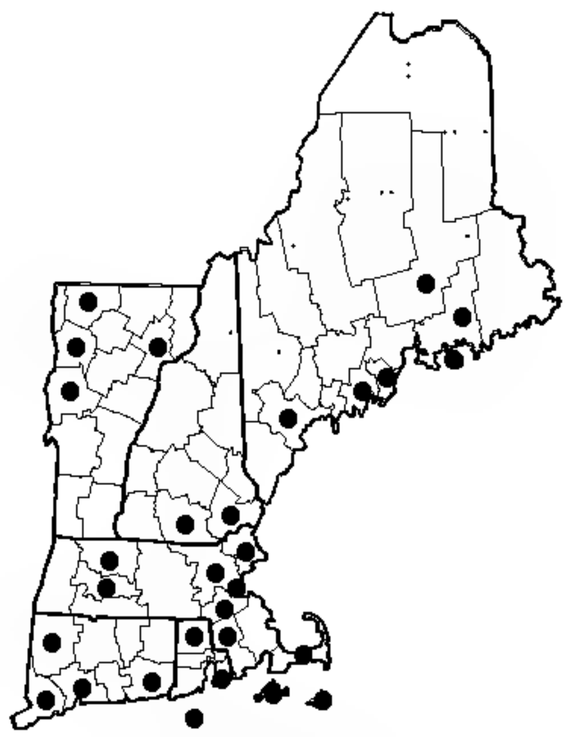
Leucophysalis grandiflora



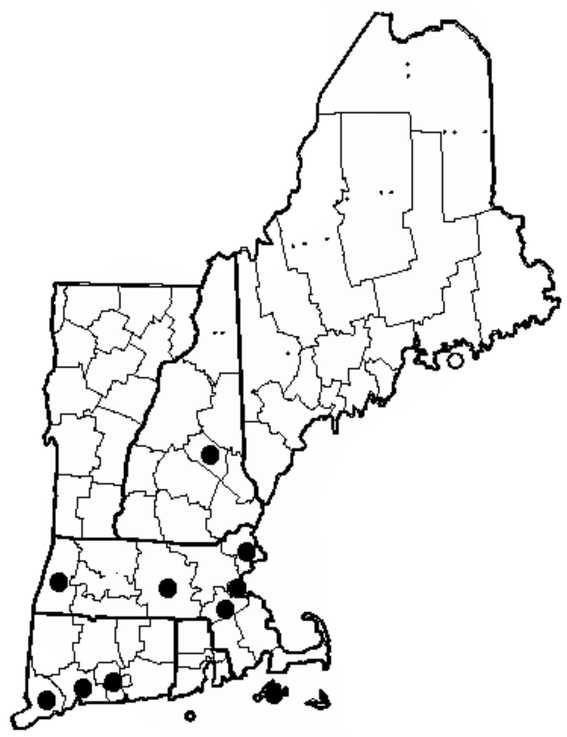
LYCIUM BARBARUM



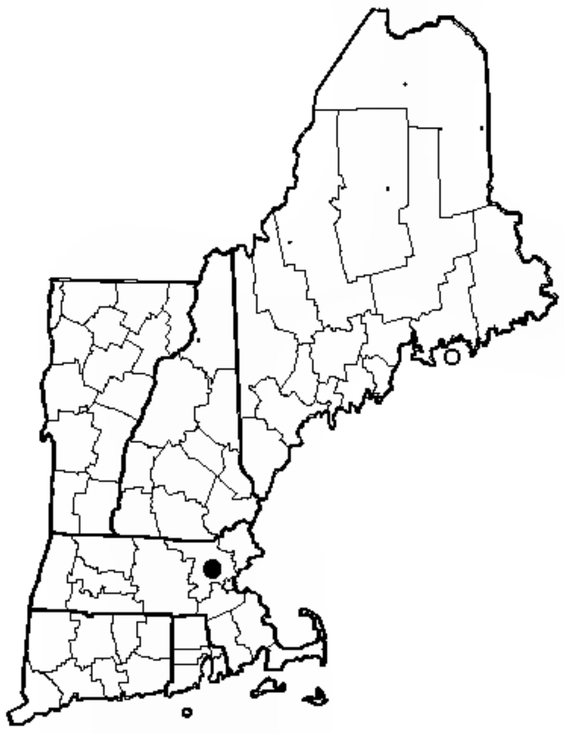
LYCIUM CHINENSE
var *CHINENSE*



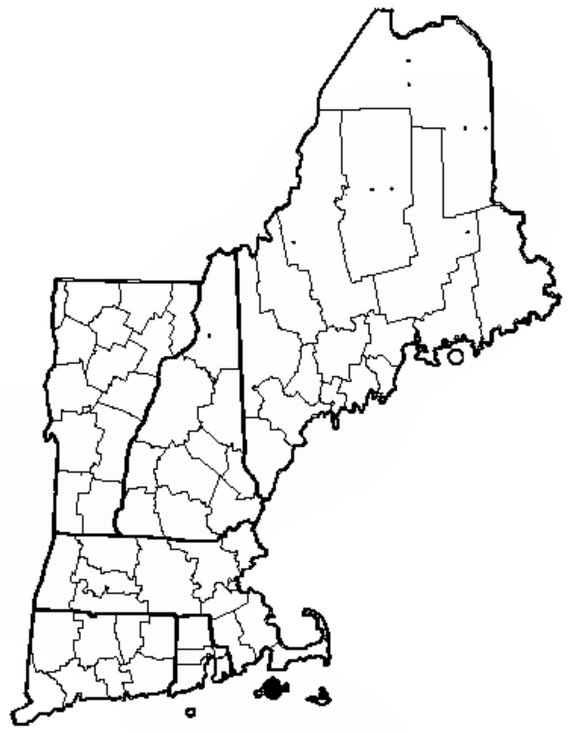
NICANDRA PHYSALODES



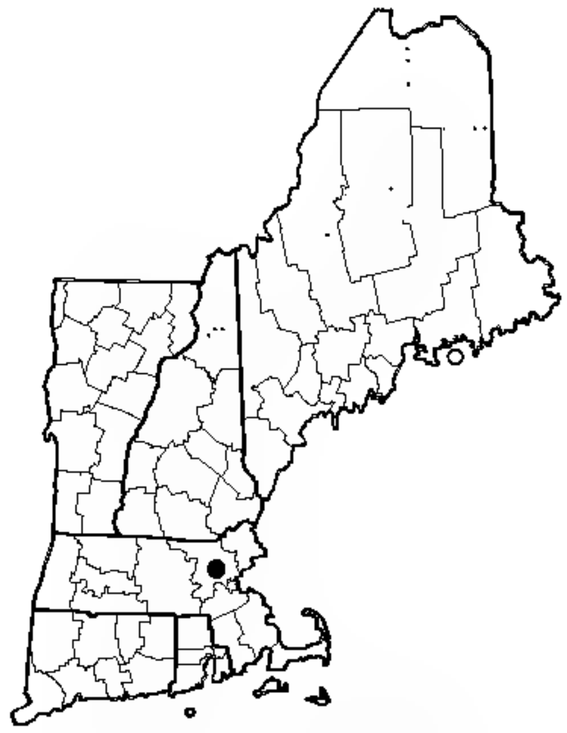
NICOTIANA ALATA



NICOTIANA LANGSDORFII

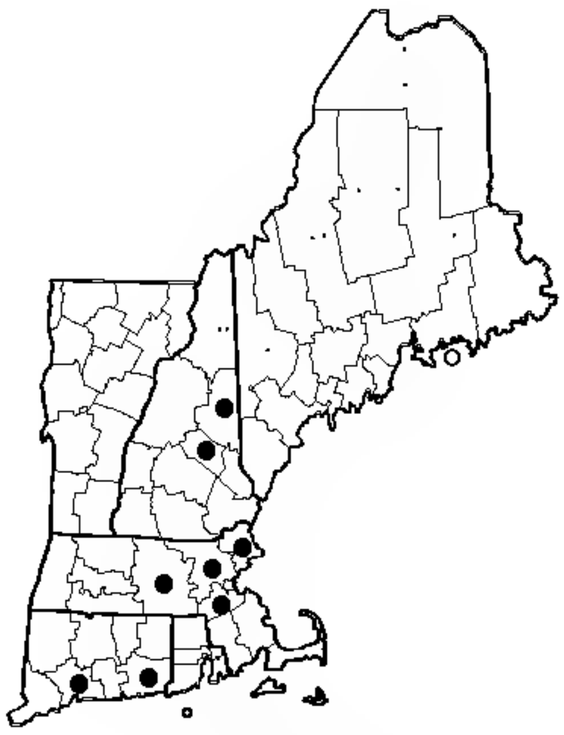


NICOTIANA LONGIFLORA

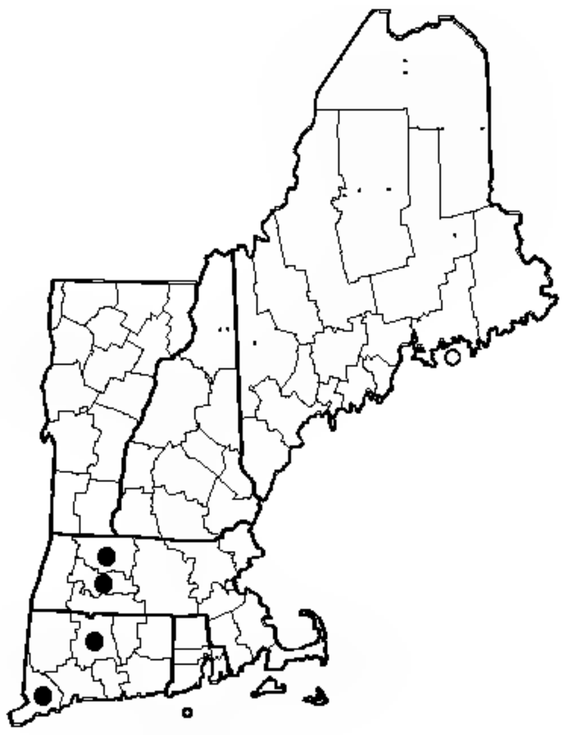


NICOTIANA QUADRIVALVIS
var *BIGELOVII*

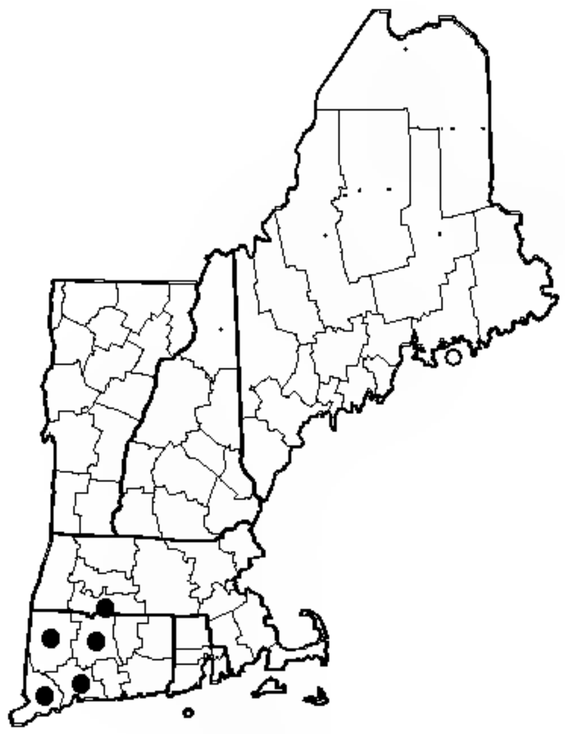
Figure 20 Distribution maps



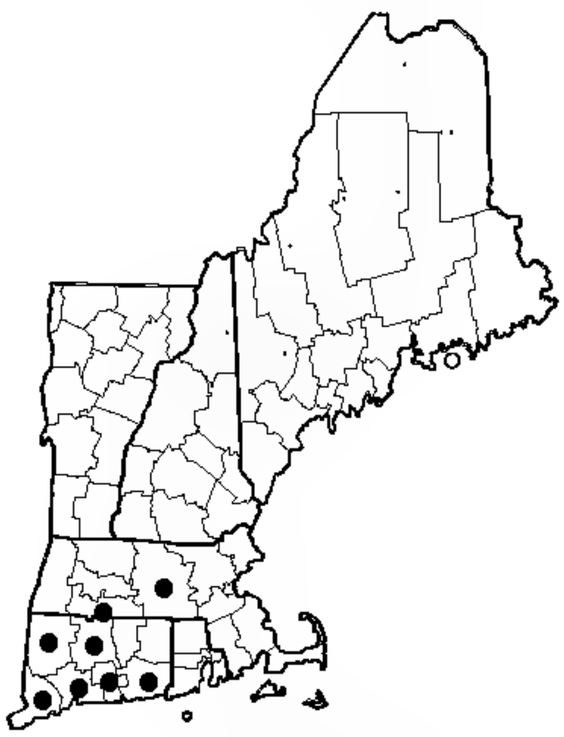
NICOTIANA RUSTICA



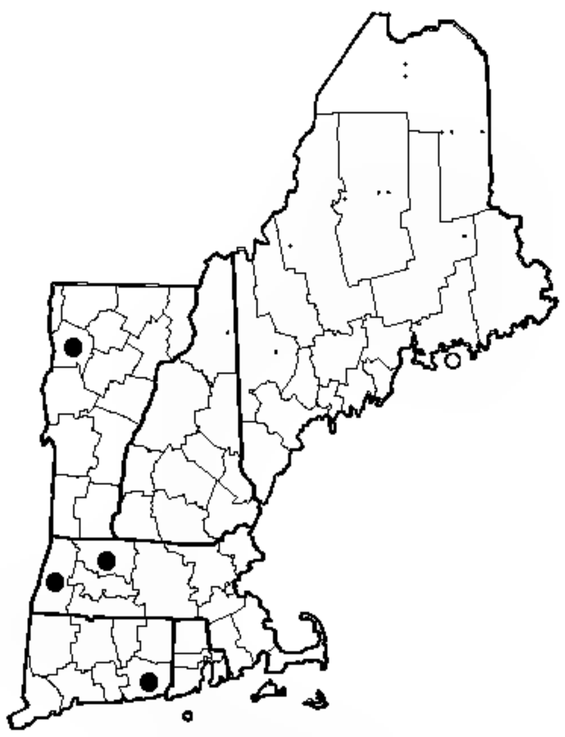
NICOTIANA TABACUM



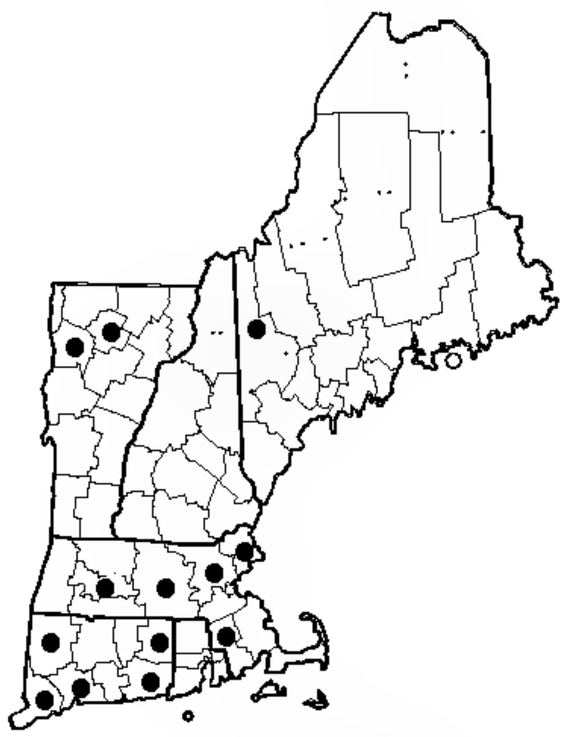
PETUNIA AXILLARIS



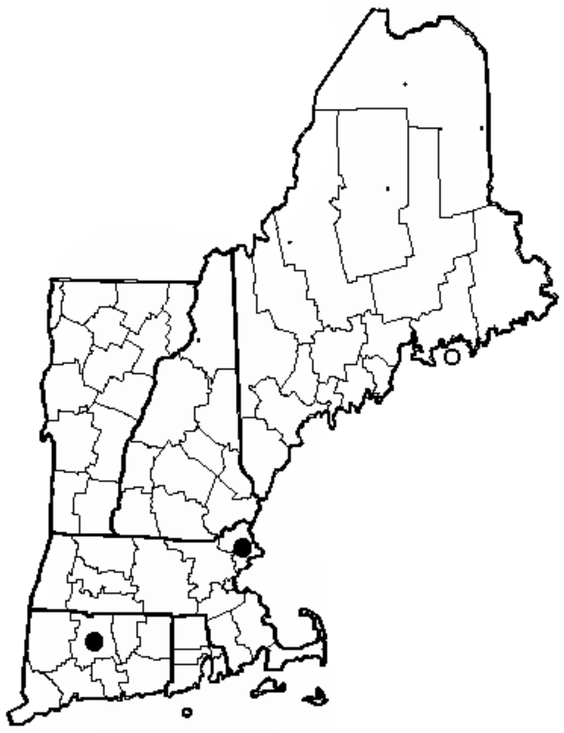
PETUNIA INTEGRIFOLIA



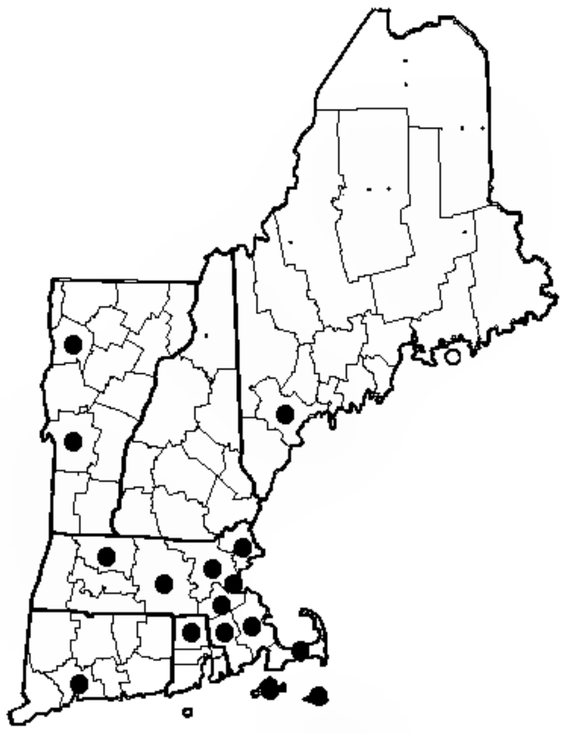
PETUNIA X ATKINSIANA



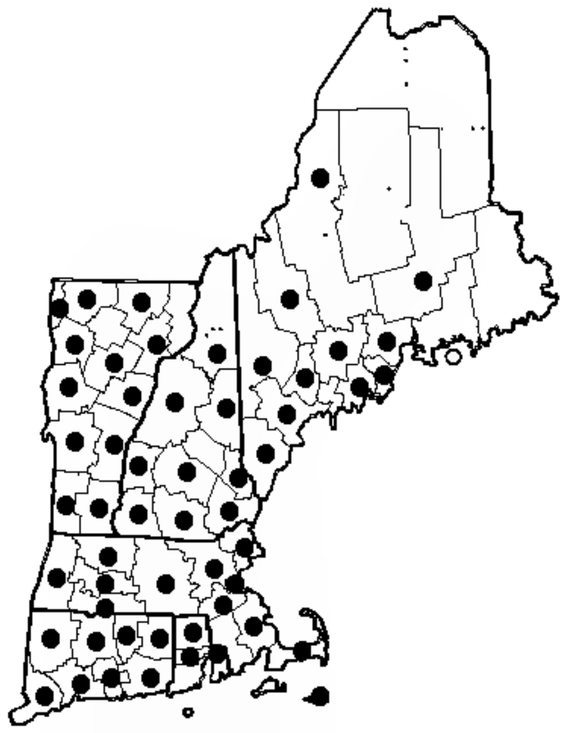
PHYSALIS ALKEKENGI



PHYSALIS ANGULATA

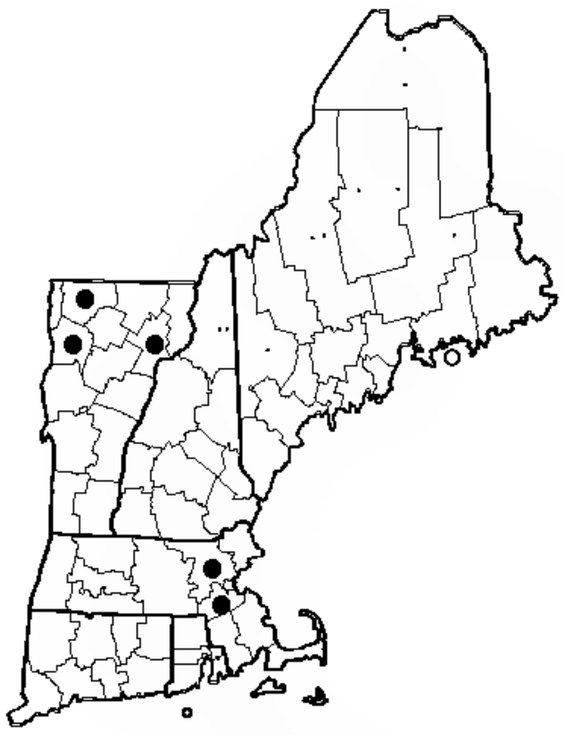


Physalis grisea

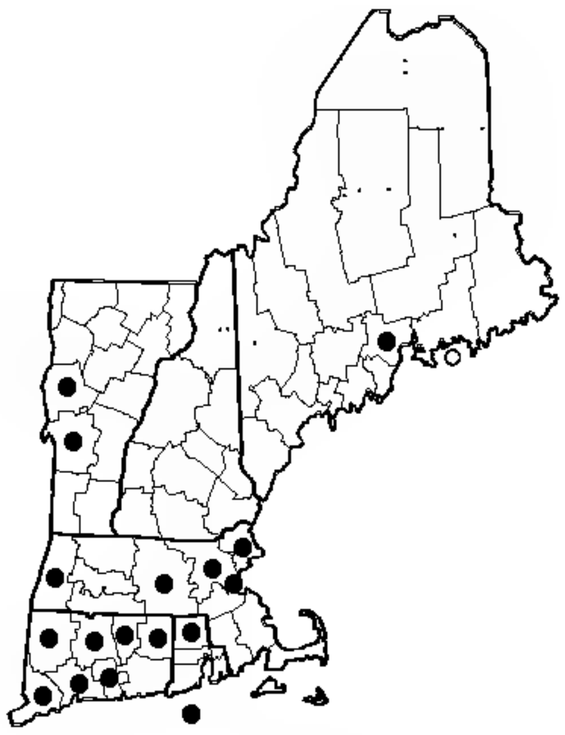


Physalis heterophylla

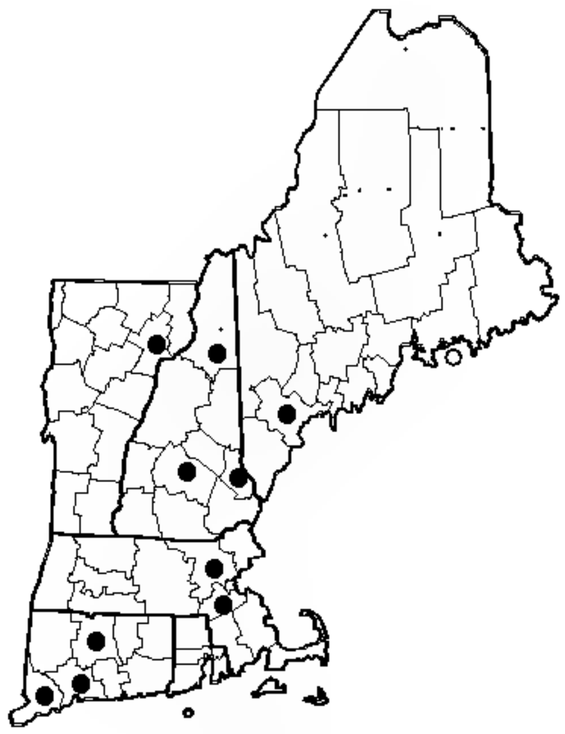
Figure 21 Distribution maps



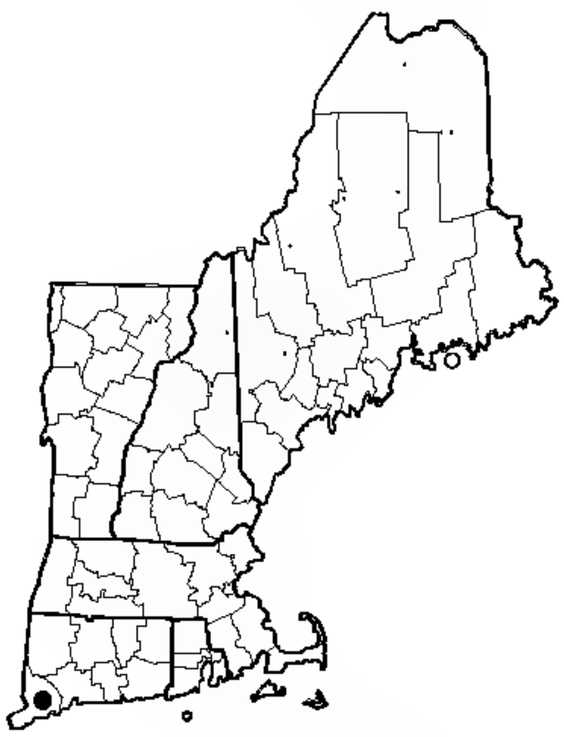
PHYSALIS IXOCARPA
var *IMMACULATA*



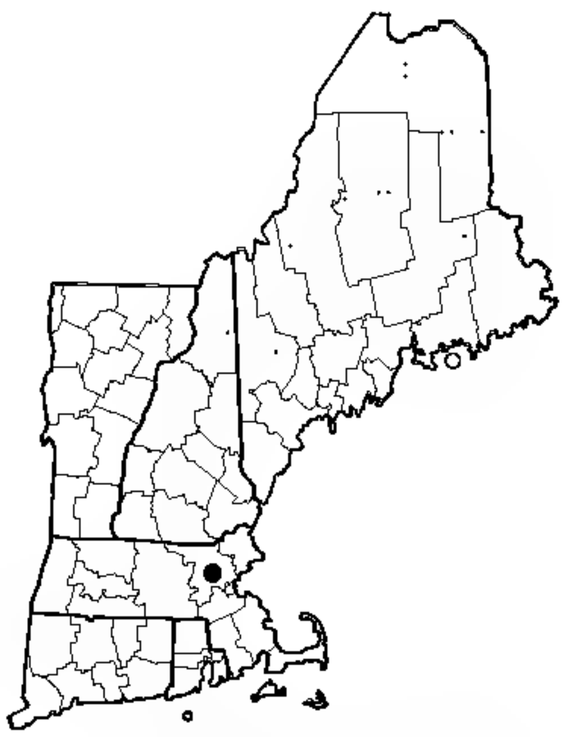
Physalis longifolia
var *subglabrata*



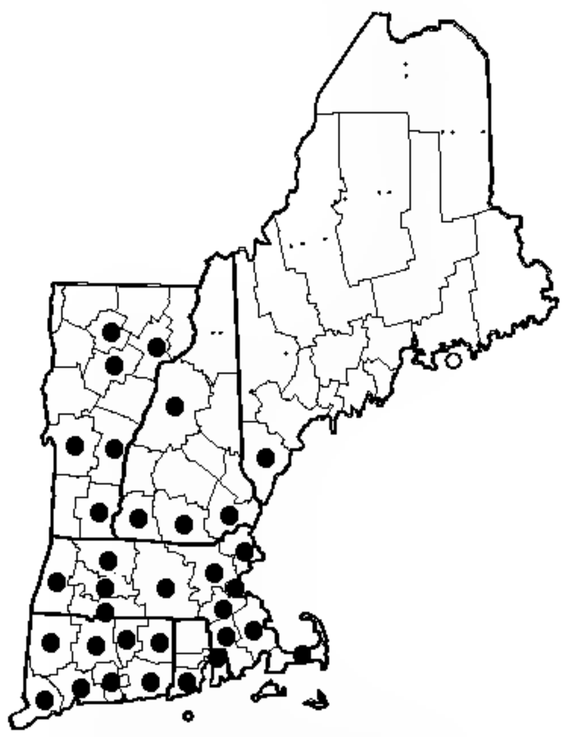
Physalis virginiana



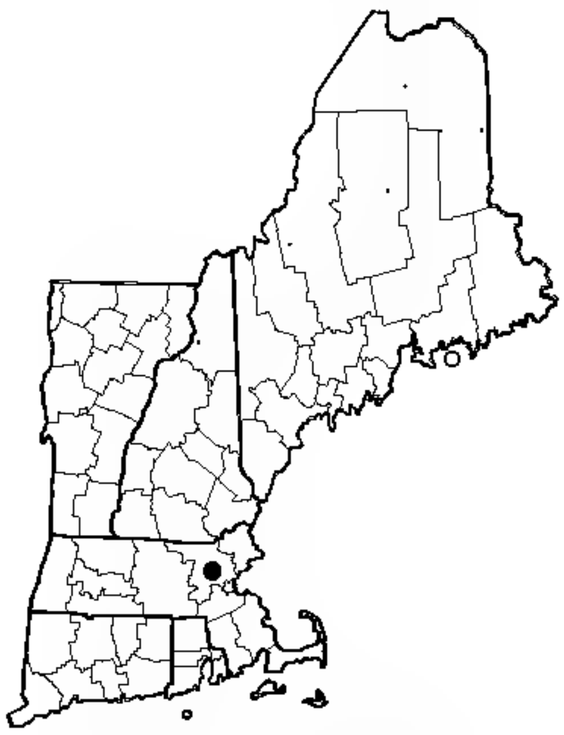
SALPIGLOSSIS SINUATA



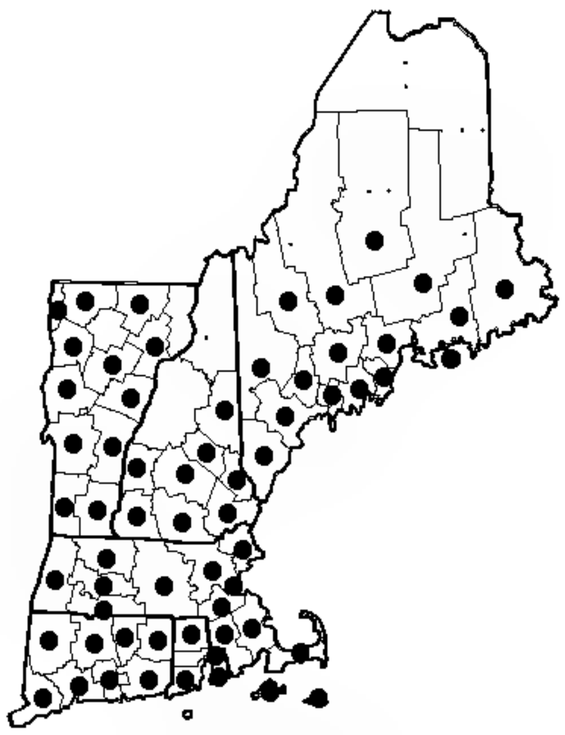
SOLANUM CAPSICOIDES



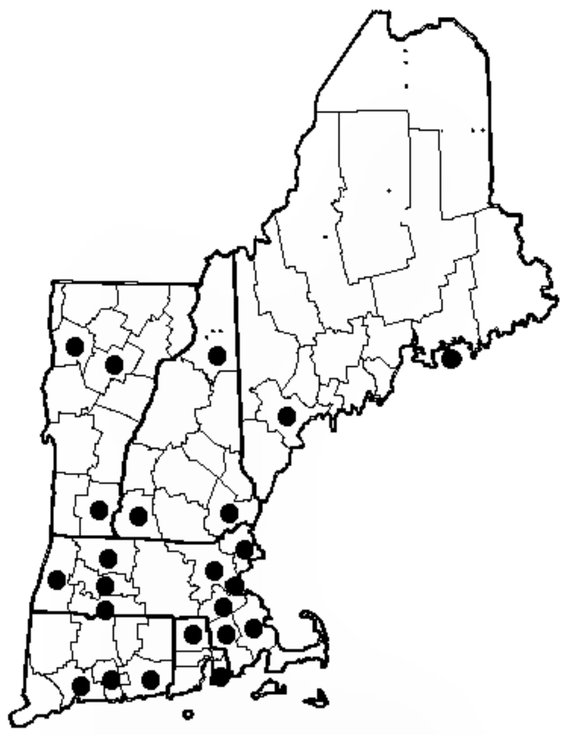
SOLANUM CAROLINIENSE



SOLANUM CITRULLIFOLIUM
var *CITRULLIFOLIUM*

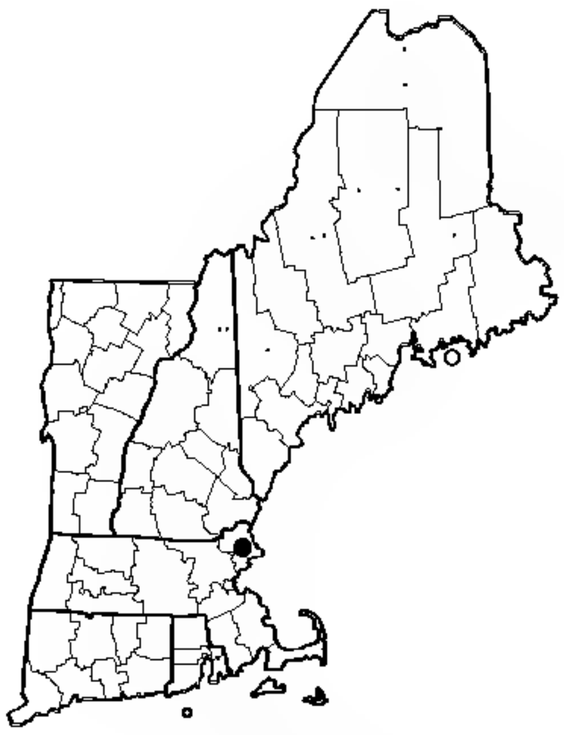


SOLANUM DULCAMARA

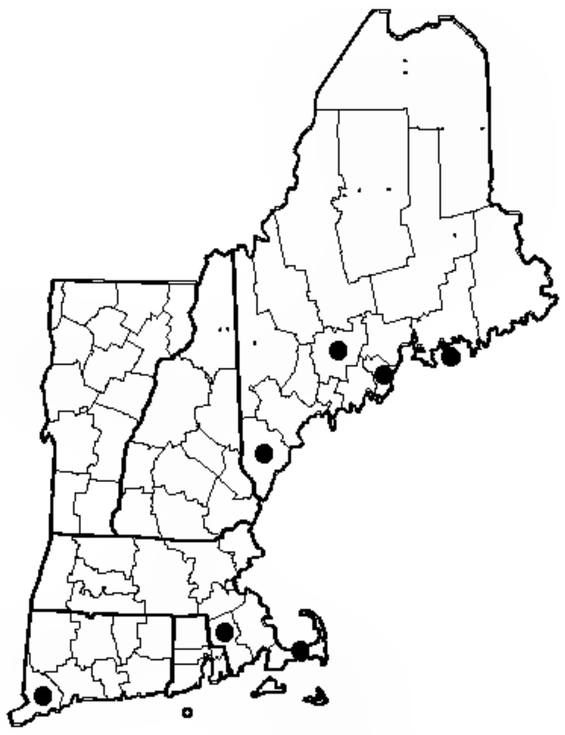


SOLANUM LYCOPERSICUM

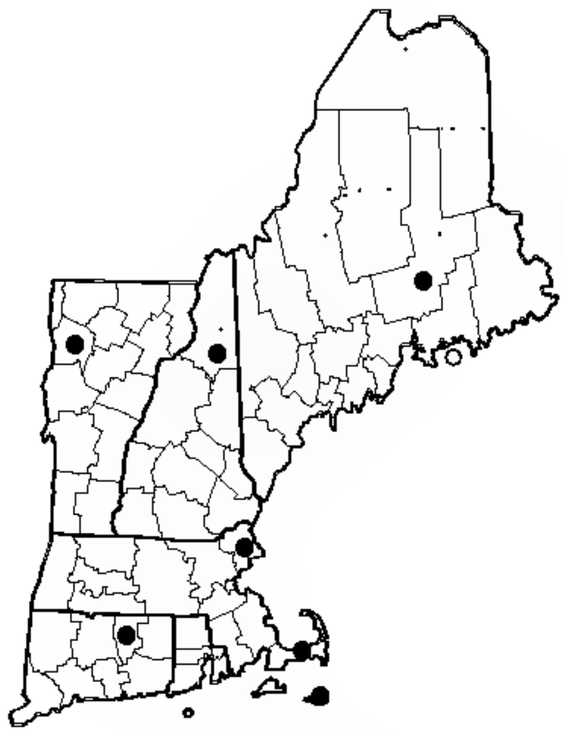
Figure 22 Distribution maps



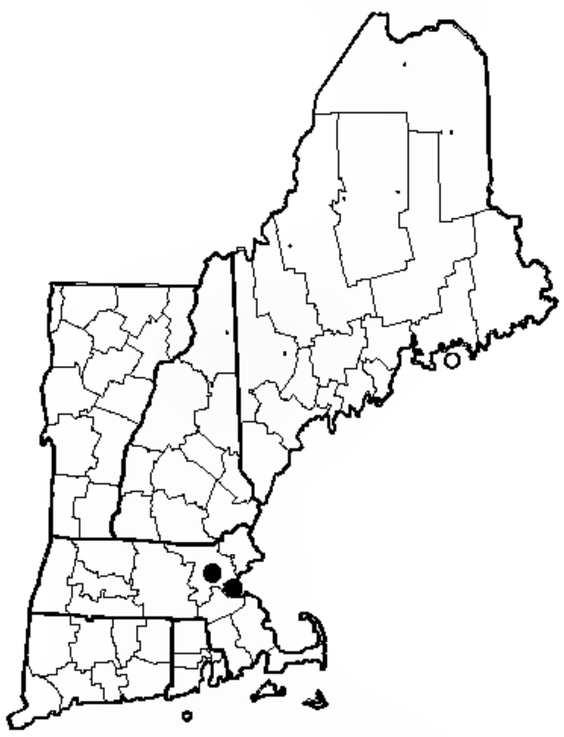
SOLANUM MEI ONGENA



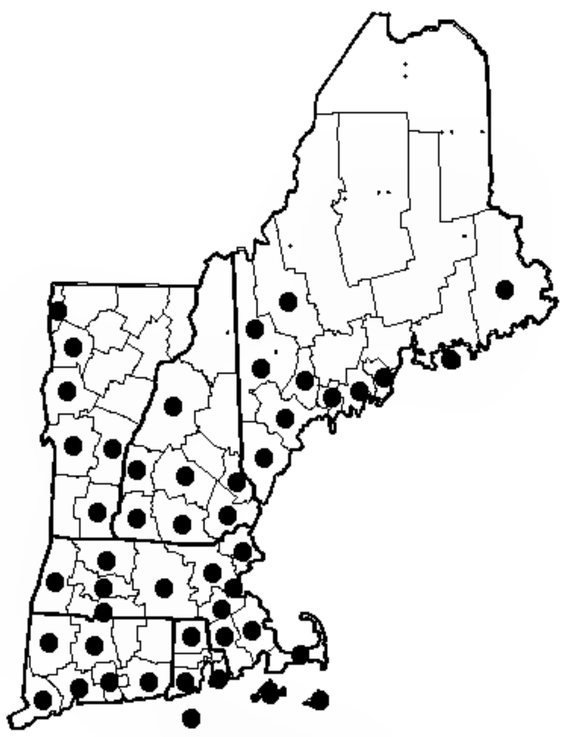
SOLANUM NIGRUM



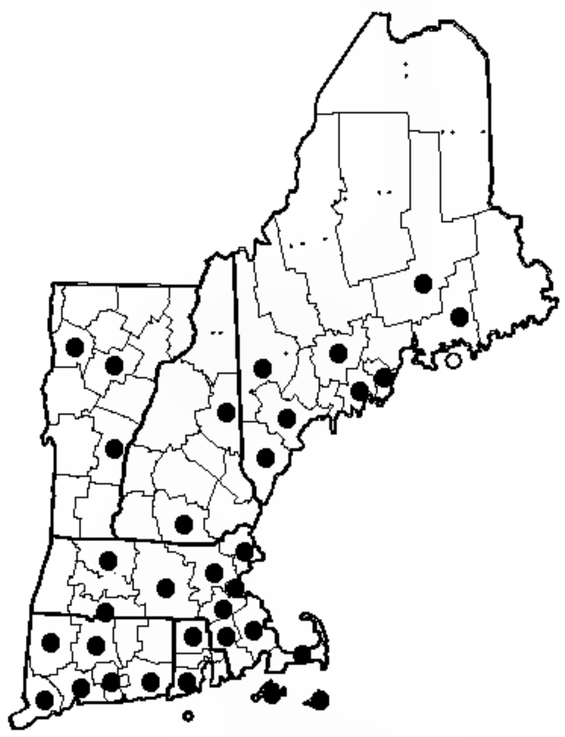
SOLANUM PHYSALIFOLIUM



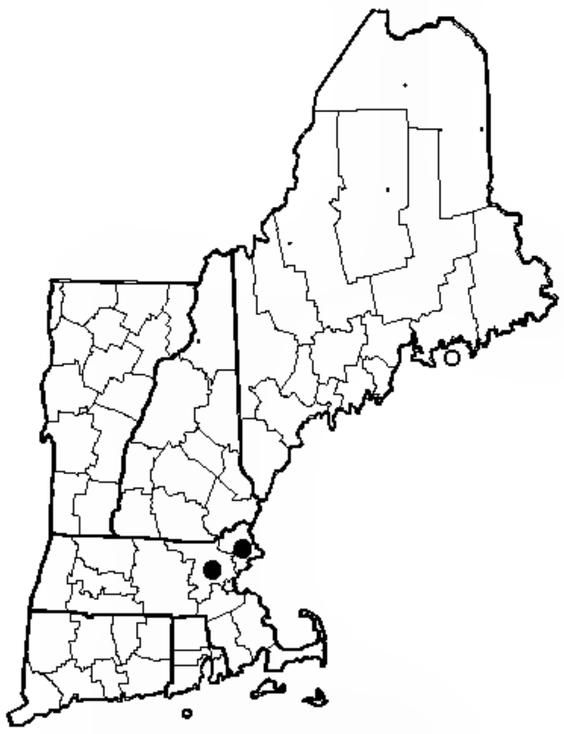
SOLANUM PSEUDOCAPSICUM



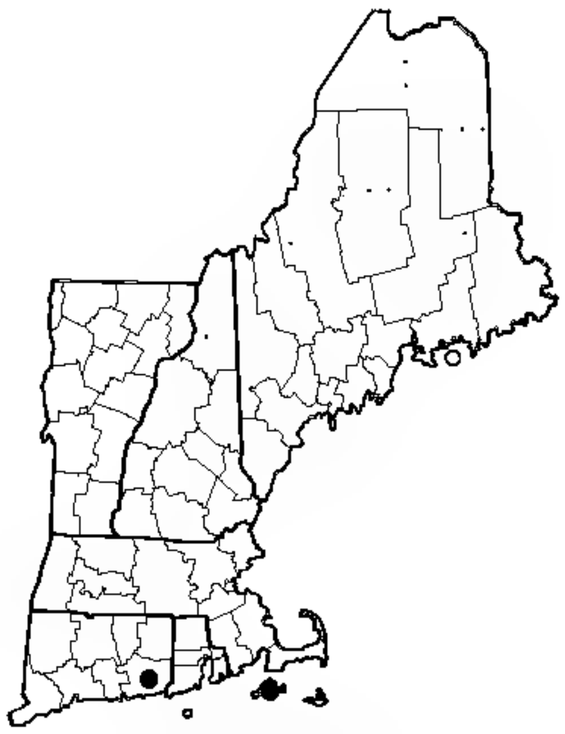
Solanum ptychanthum



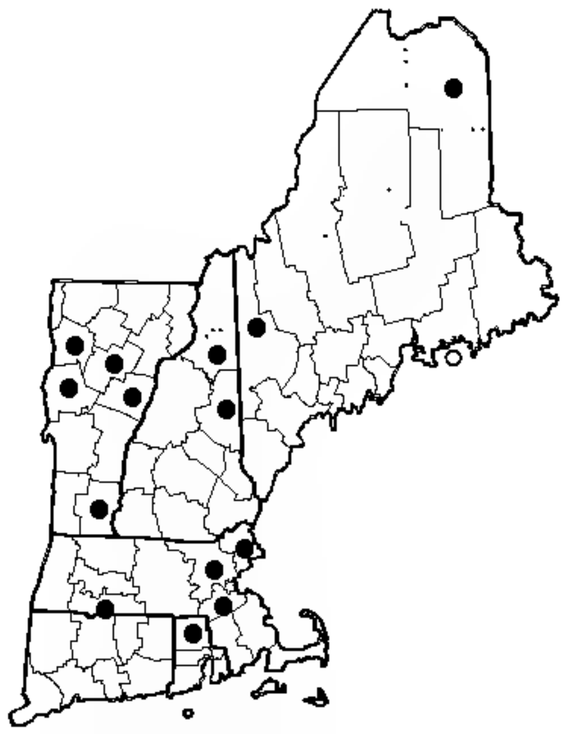
SOLANUM ROSTRATUM



SOLANUM SISYMBRIIFOLIUM

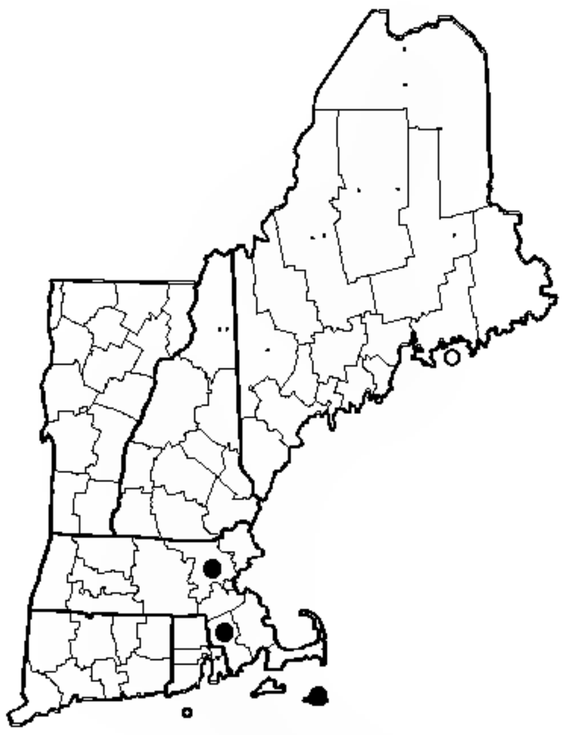


SOLANUM TRIFI ORUM

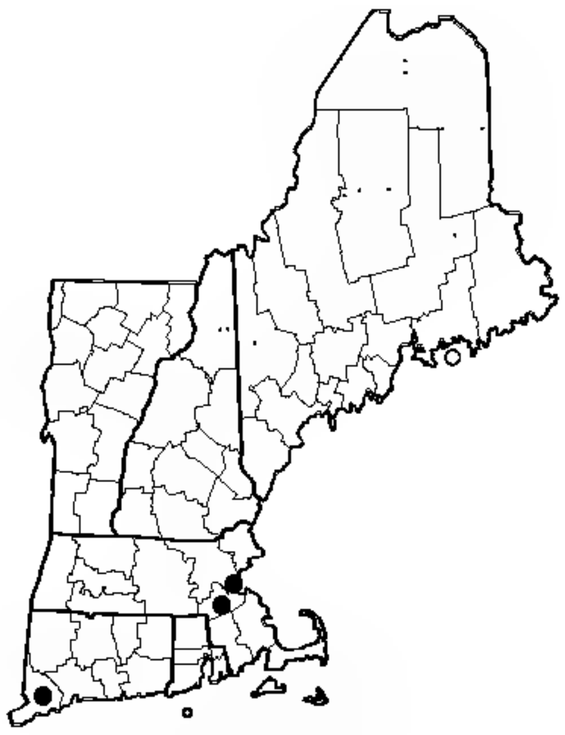


SOLANUM TUBEROSUM

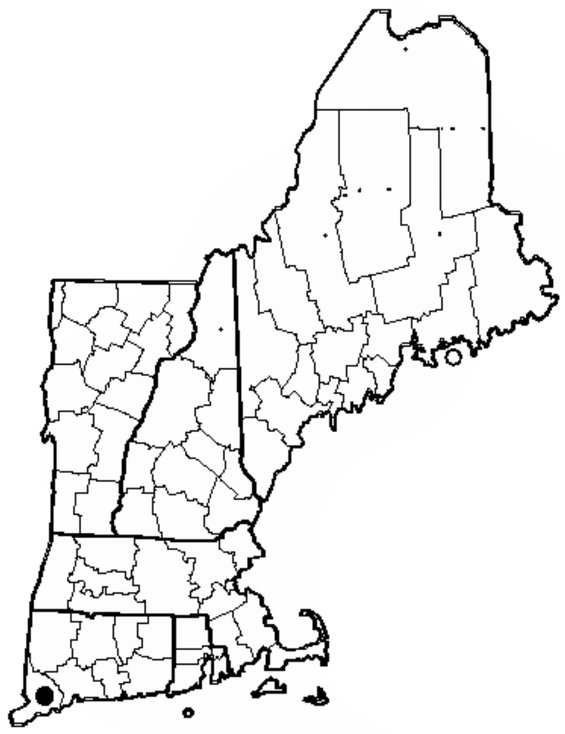
Figure 23 Distribution maps



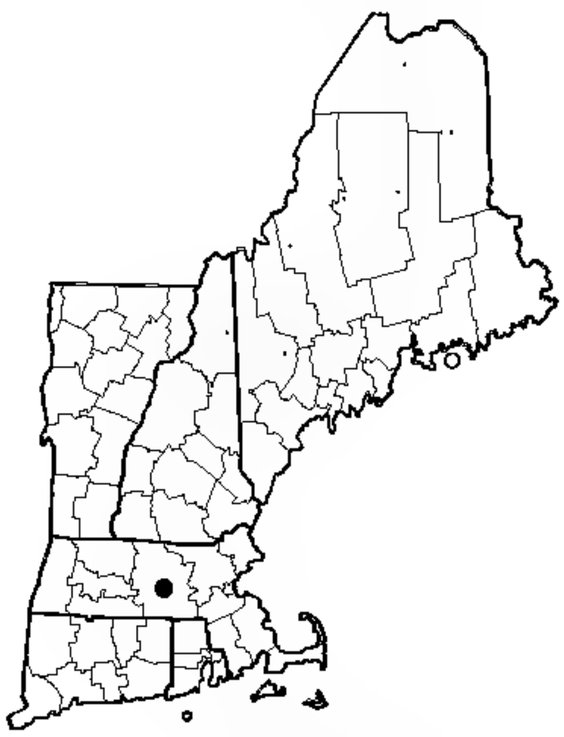
SOLANUM VILLOSUM



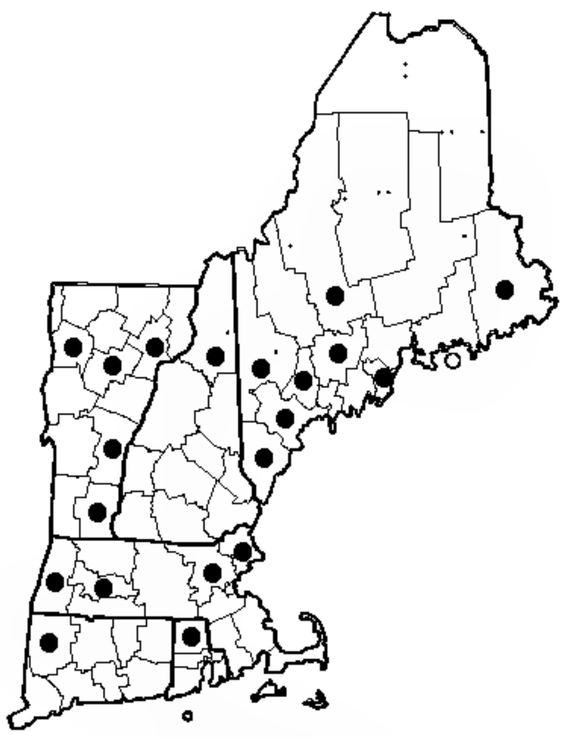
TAMARIX PARVIFLORA



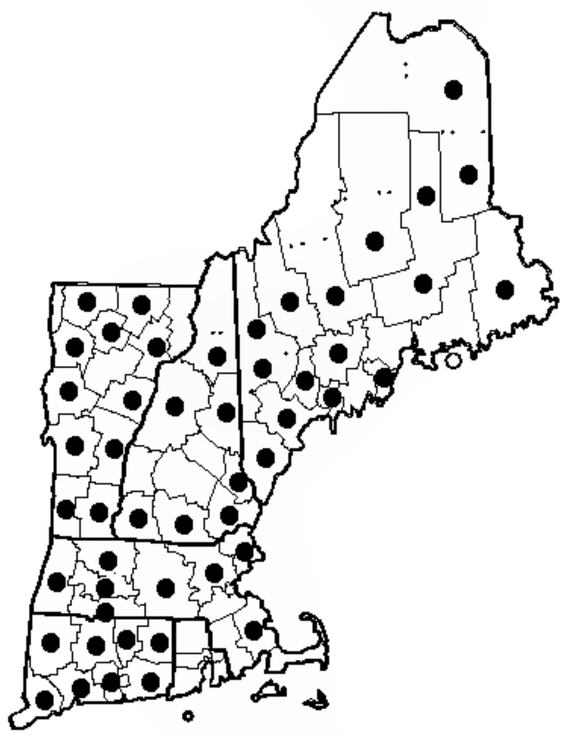
TAMARIX RAMOSISSIMA



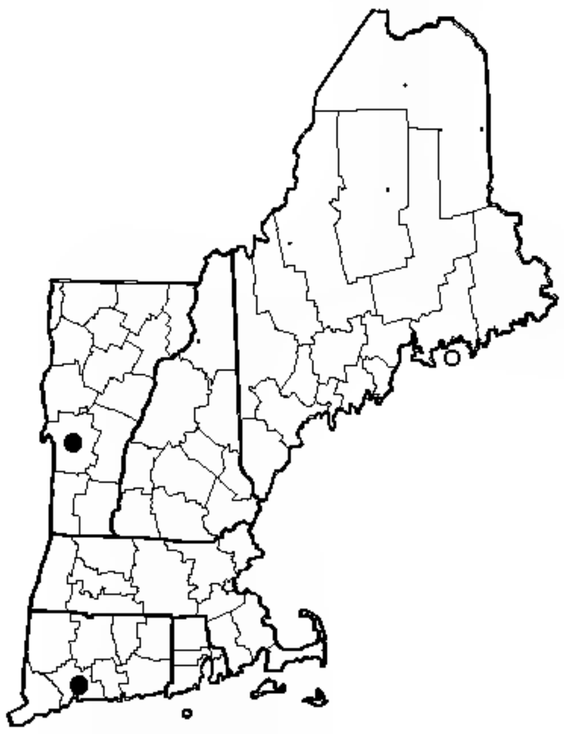
DAPHNE CNEORUM



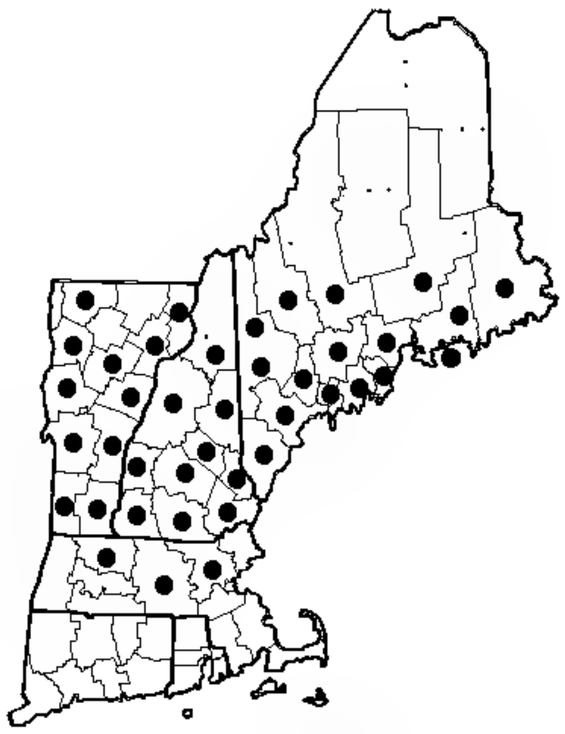
DAPHNE MEZEREUM



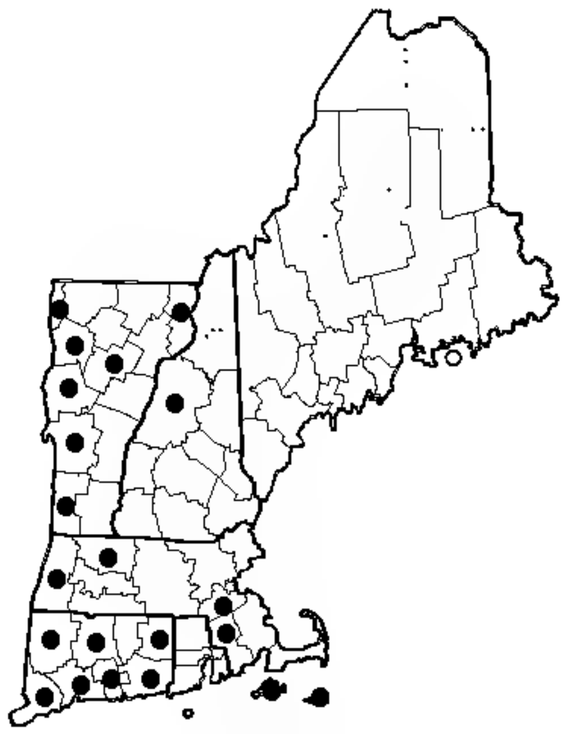
Dirca palustris



Hybanthus concolor

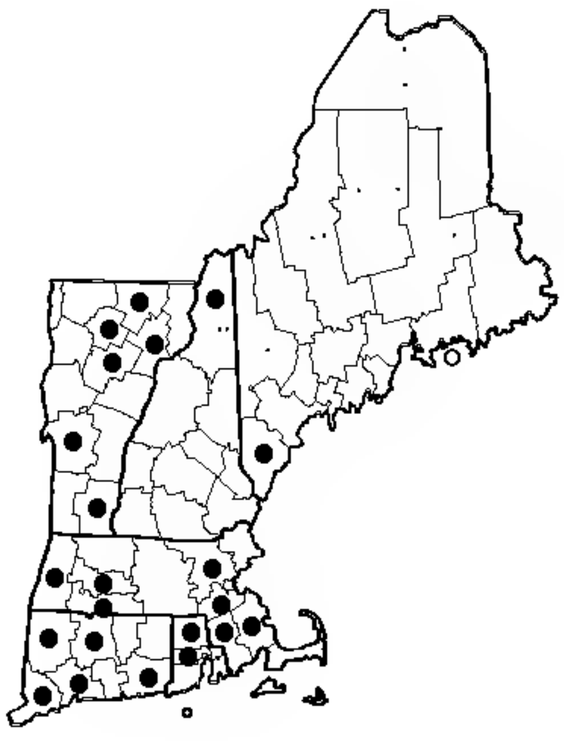


Viola adunca
var *adunca*

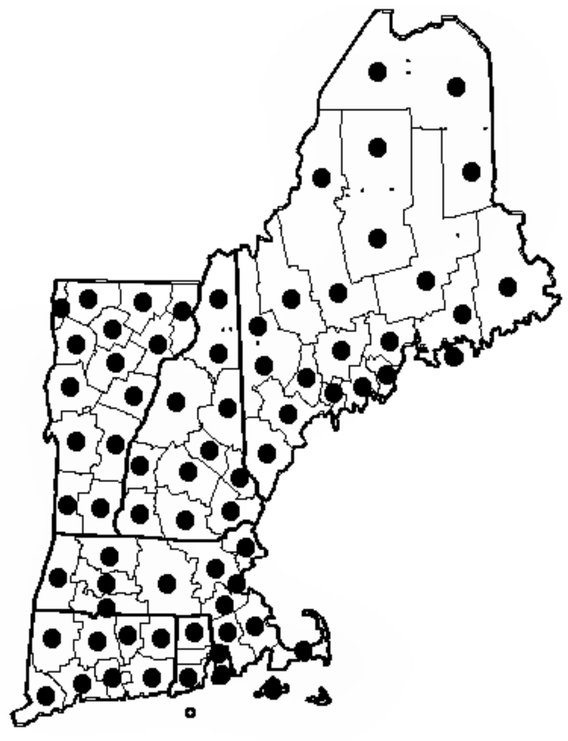


Viola affinis

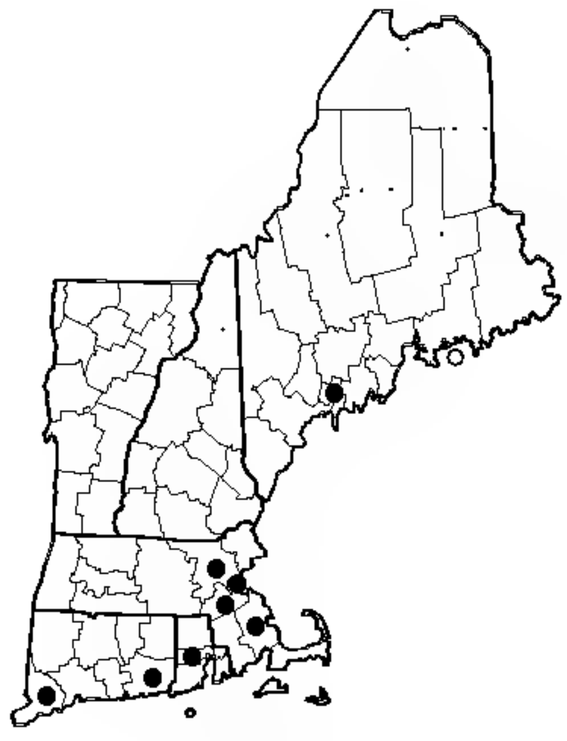
Figure 24 Distribution maps



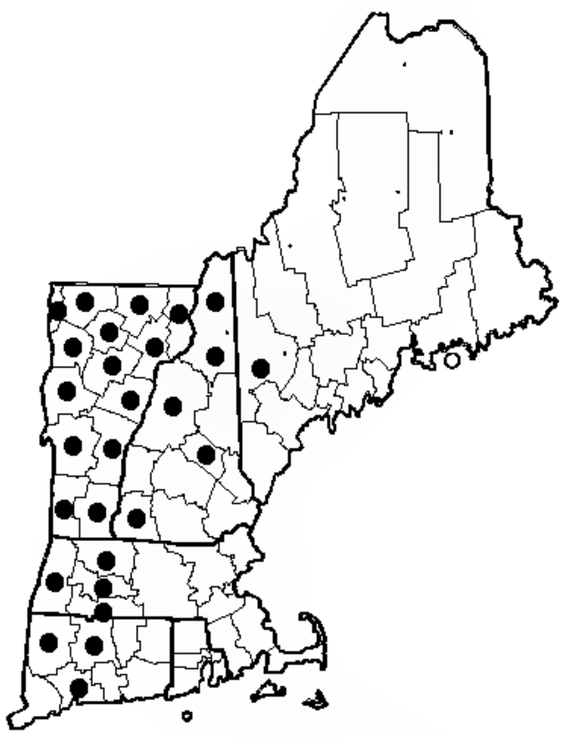
VIOLA ARVENSIS



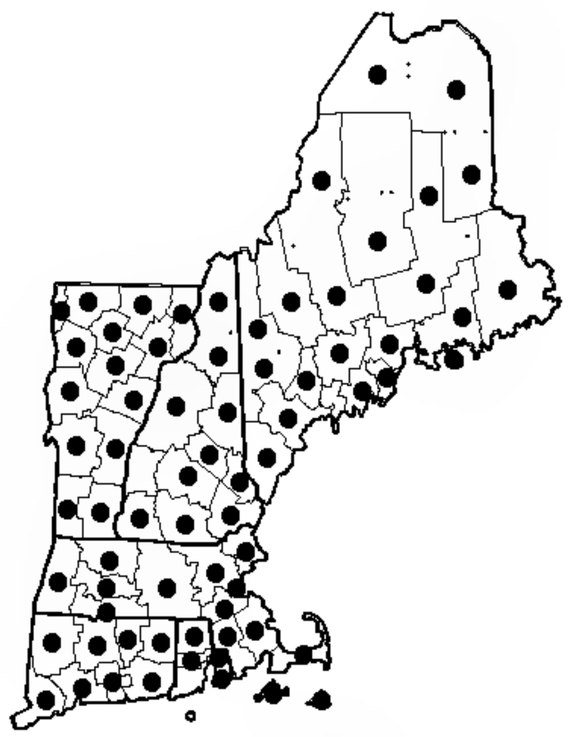
Viola blanda



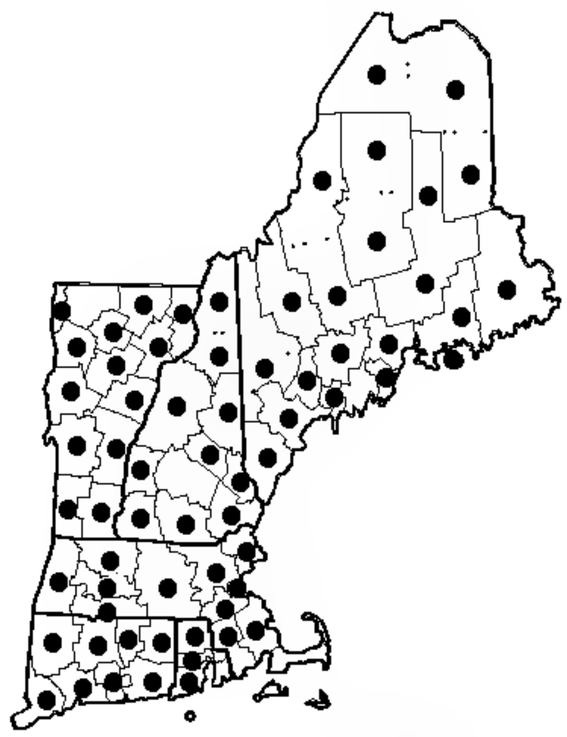
Viola brittoniana



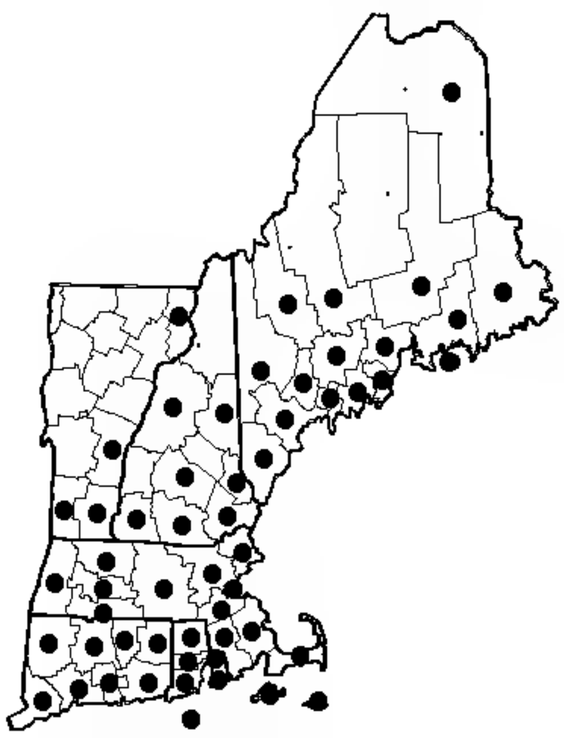
Viola canadensis
var *canadensis*



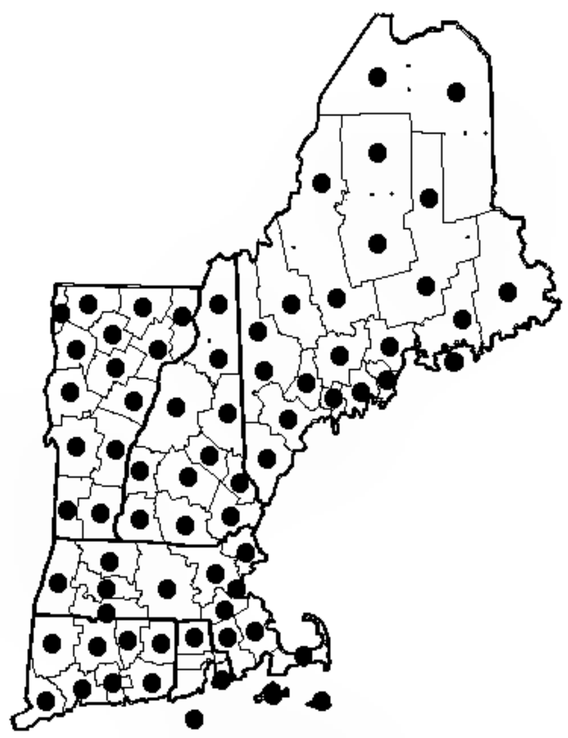
Viola cucullata



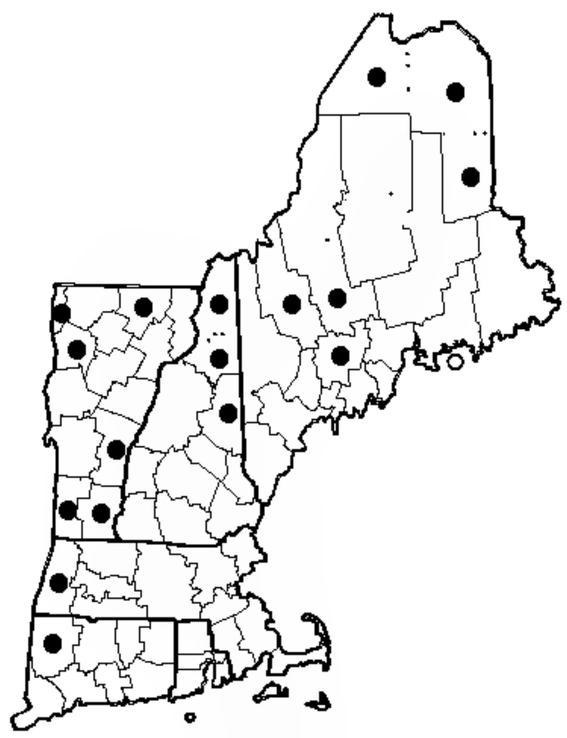
Viola labradorica



Viola lanceolata

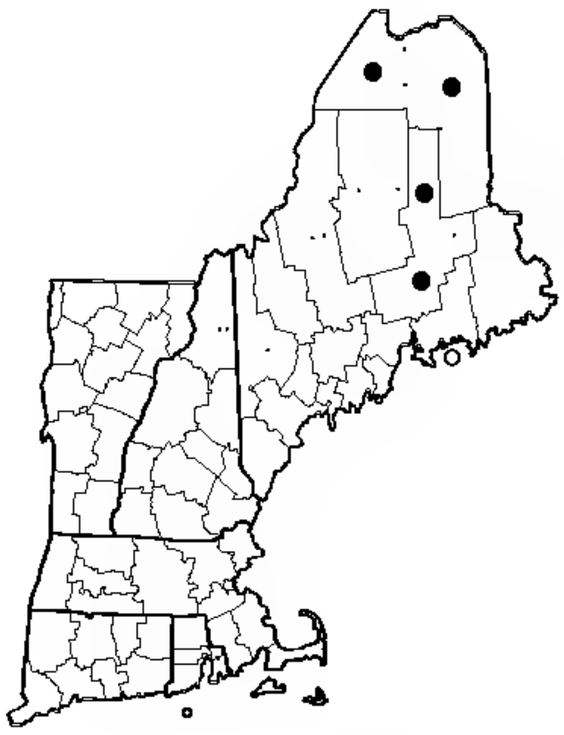


Viola mackloskeyi

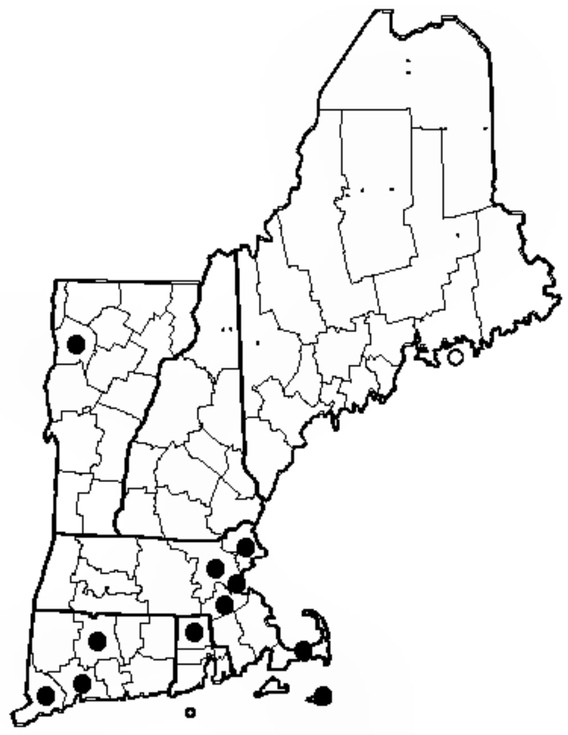


Viola nephrophylla

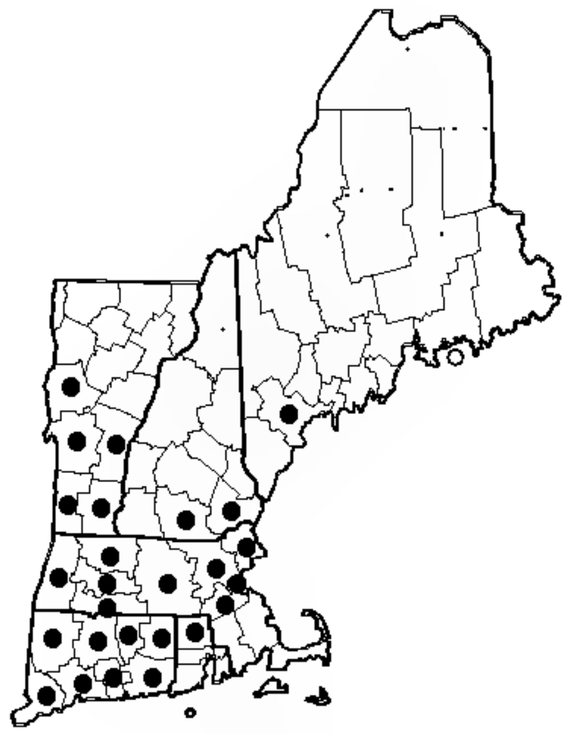
Figure 25 Distribution maps



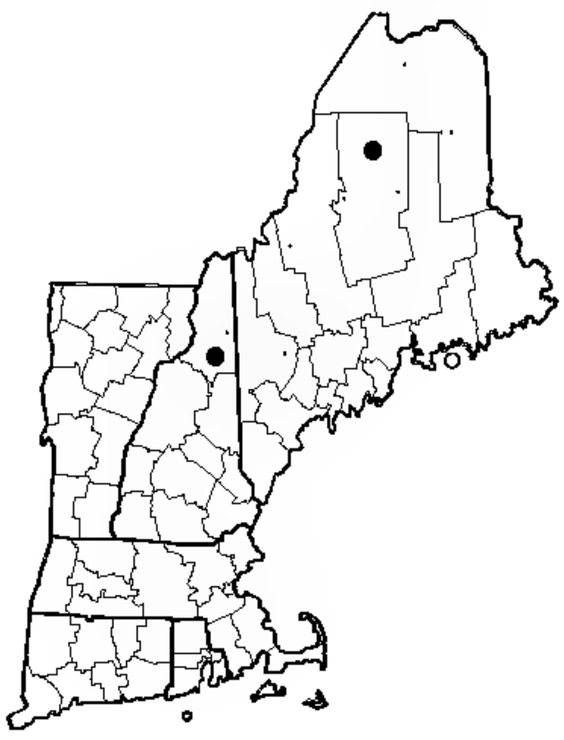
Viola novae-angliae



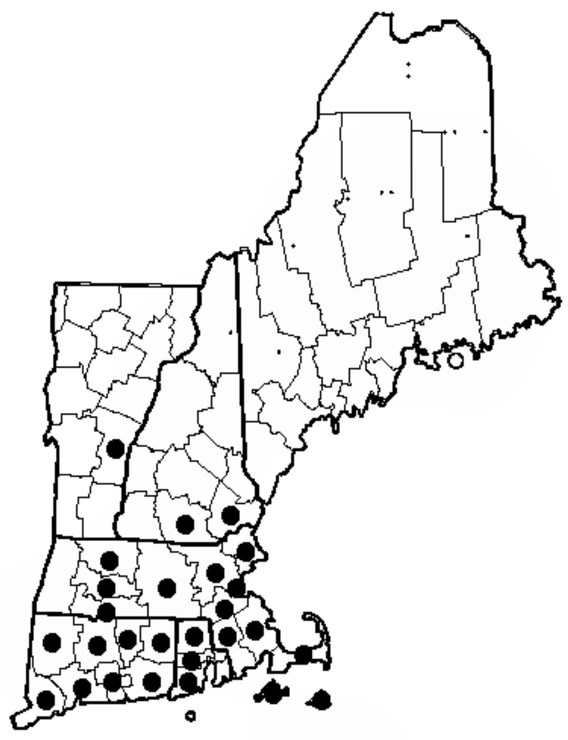
VIOLA ODORATA



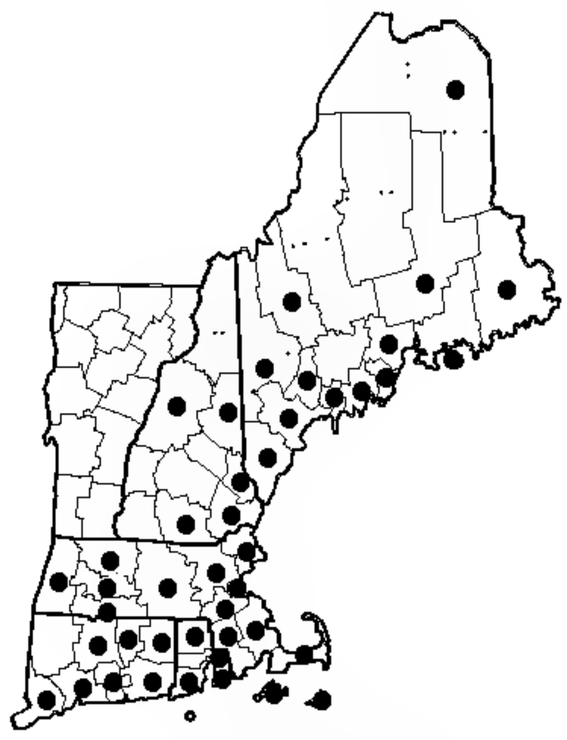
Viola palmata
var *palmata*



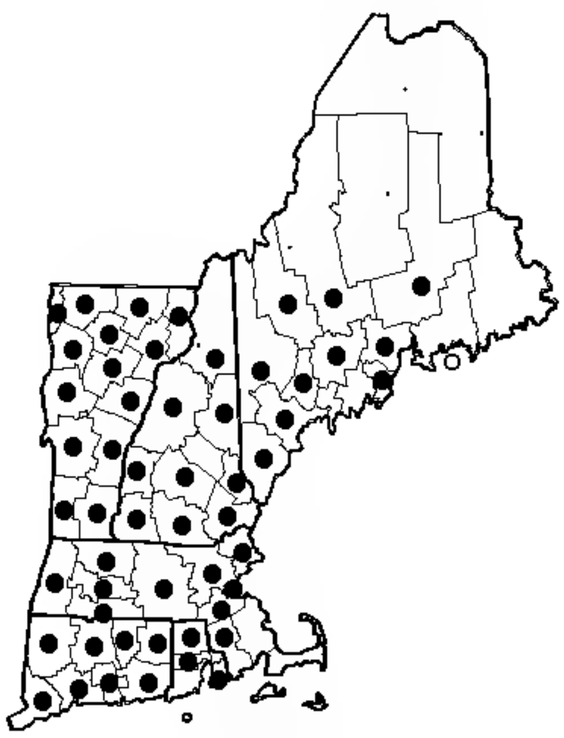
Viola palustris



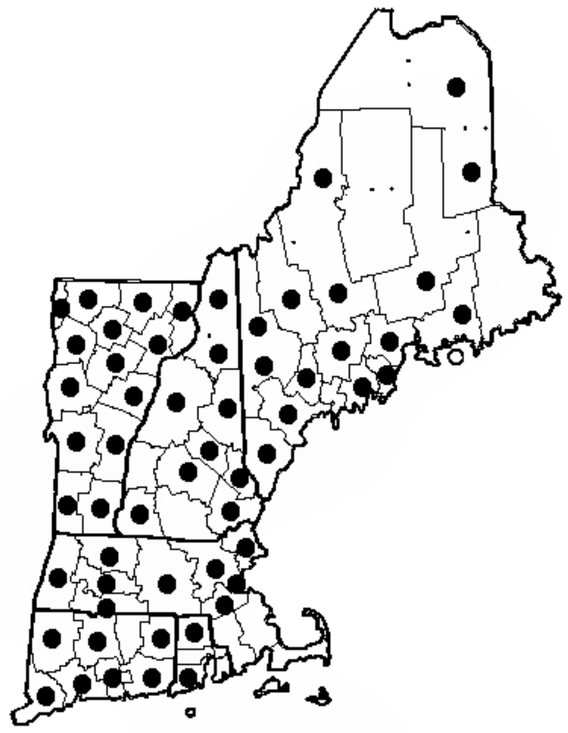
Viola pedata
var *pedata*



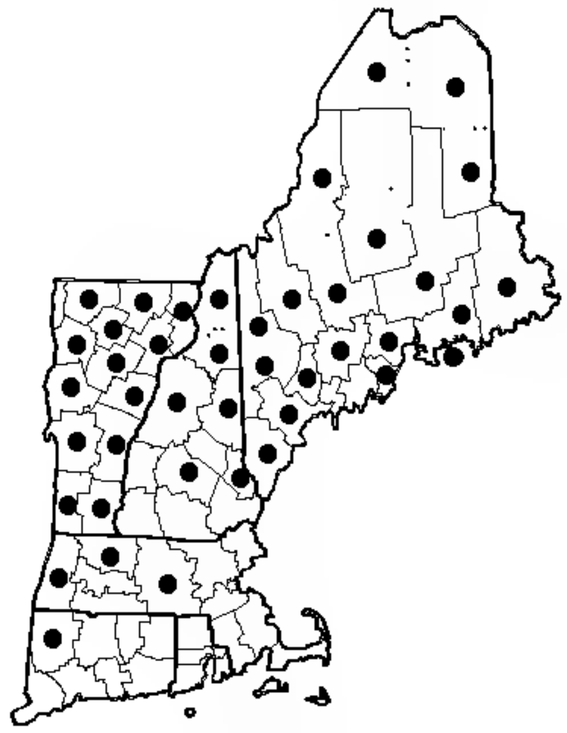
Viola primulifolia
var *primulifolia*



Viola pubescens
var *pubescens*

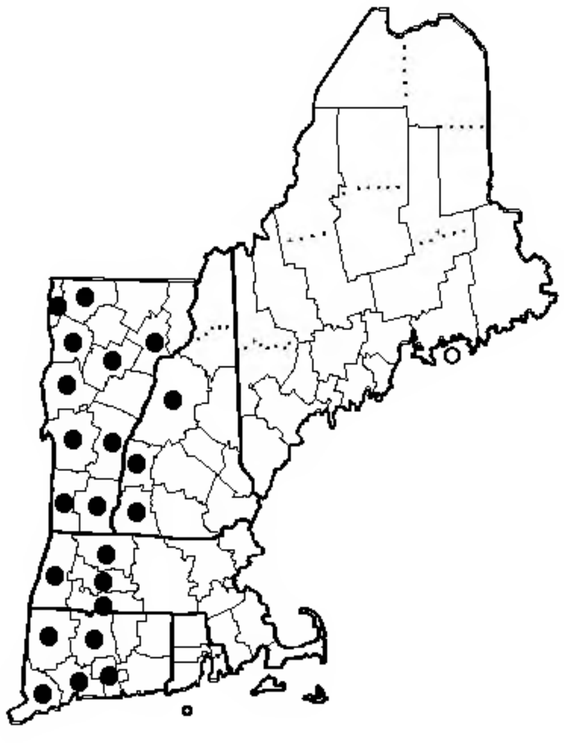


Viola pubescens
var *scabriuscula*

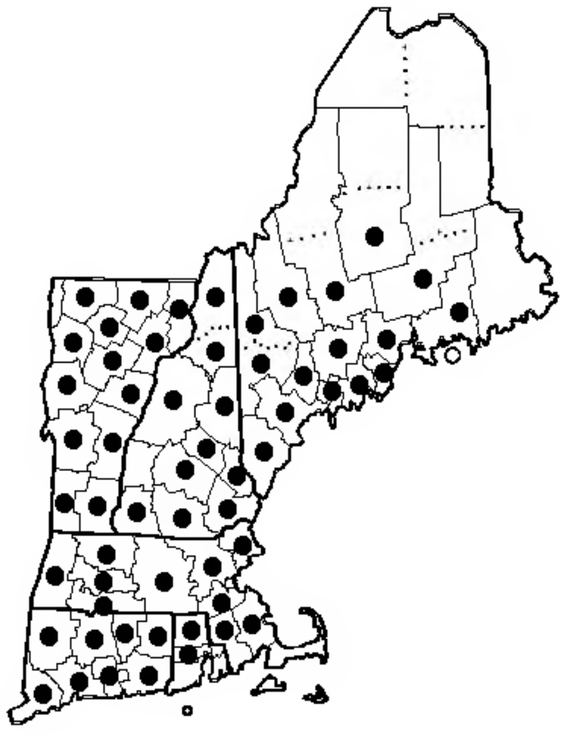


Viola renifolia

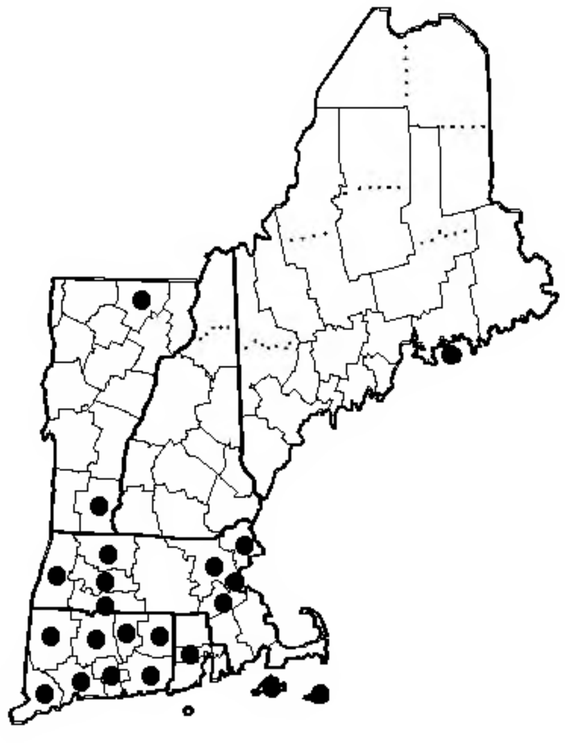
Figure 26 Distribution maps



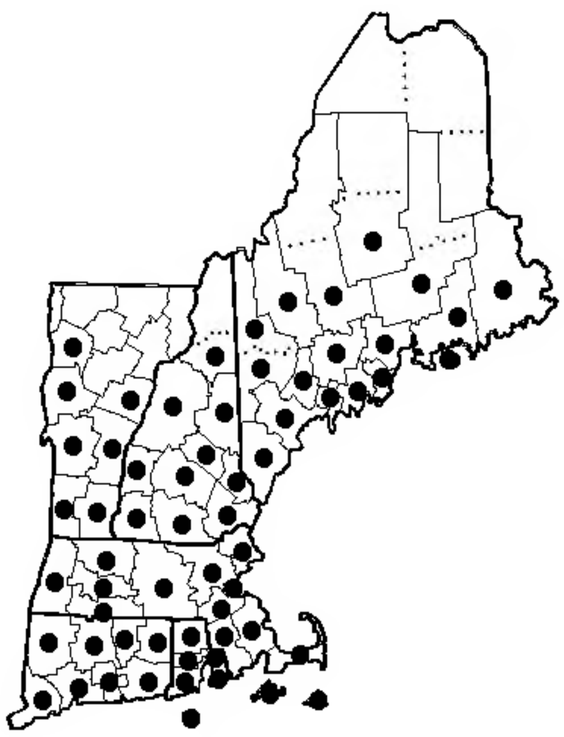
Viola rostrata



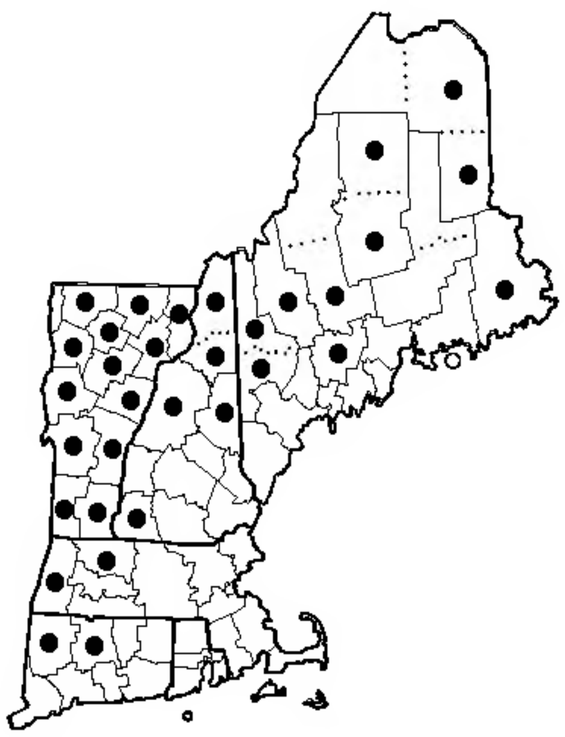
Viola rotundifolia



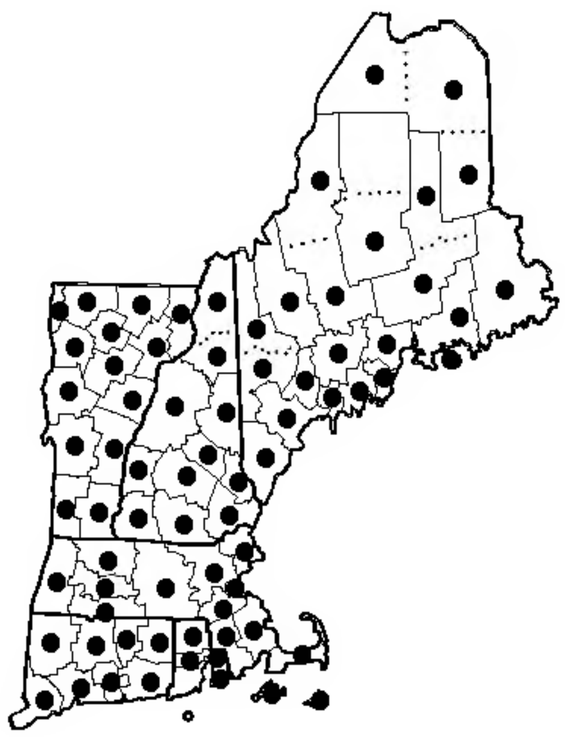
Viola sagittata
var. *sagittata*



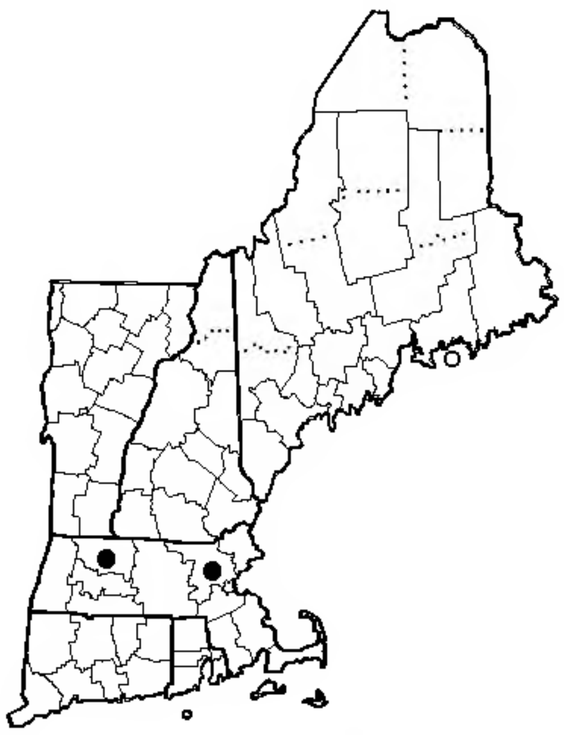
Viola sagittata
var. *ovata*



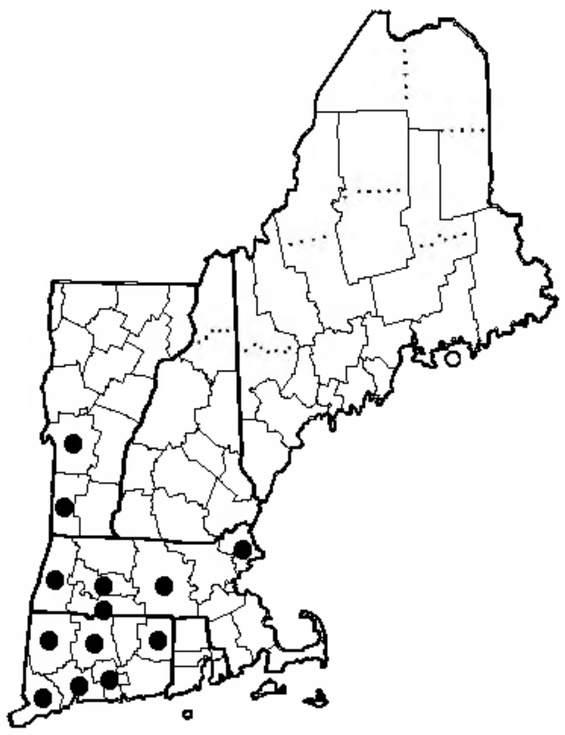
Viola selkirkii



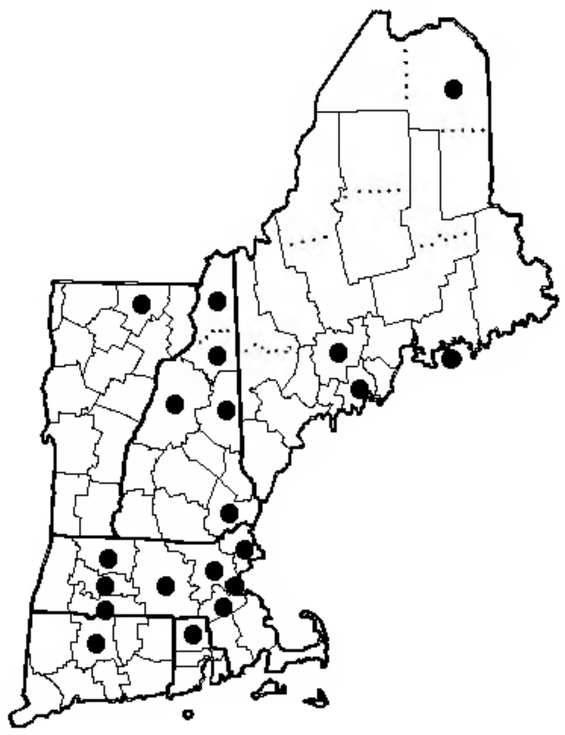
Viola sororia



Viola striata

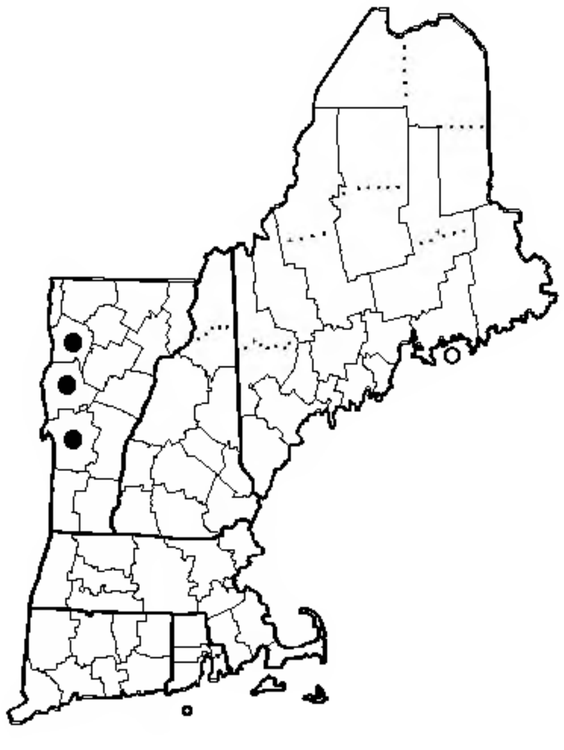


Viola subsinuata

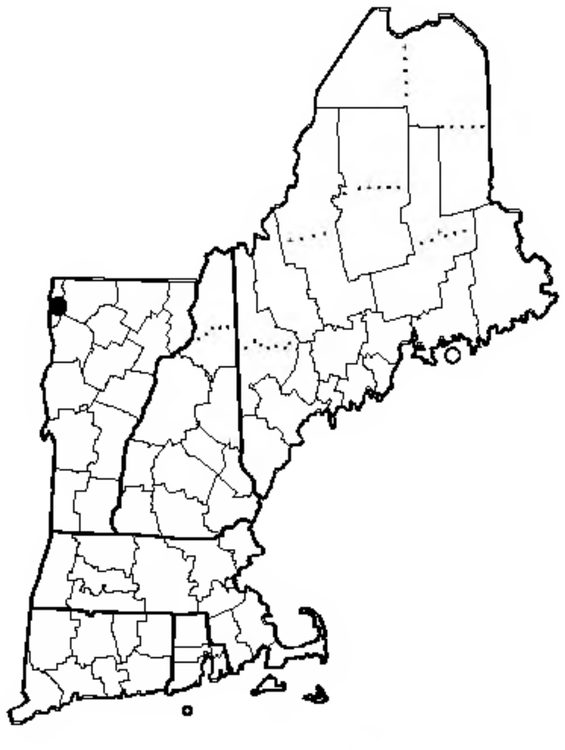


VIOLA TRICOLOR
var. *TRICOLOR*

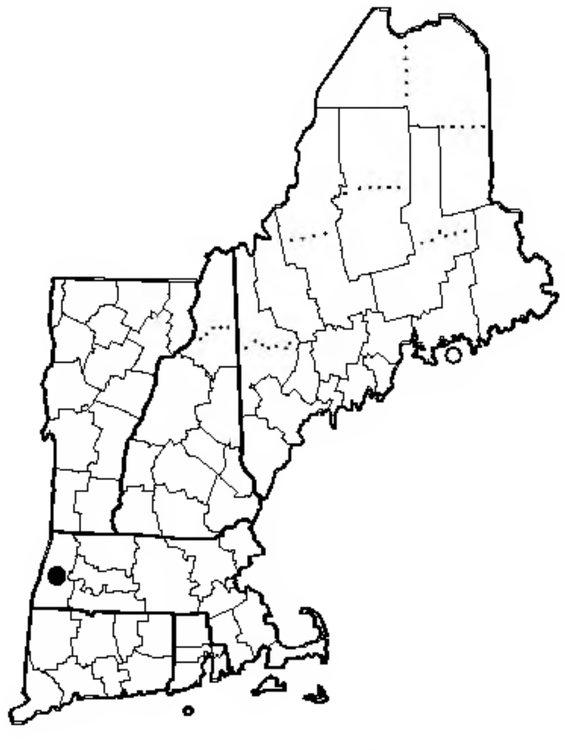
Figure 27. Distribution maps.



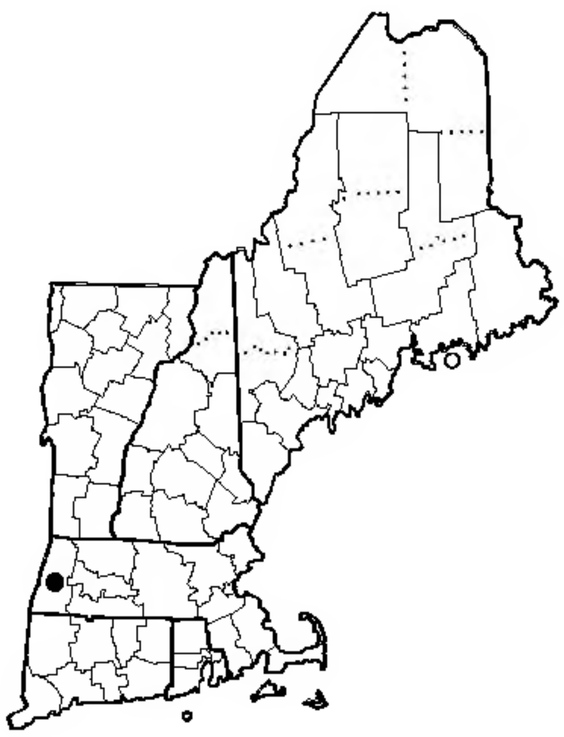
Viola adunca var. *adunca*
X *V. labradorica*



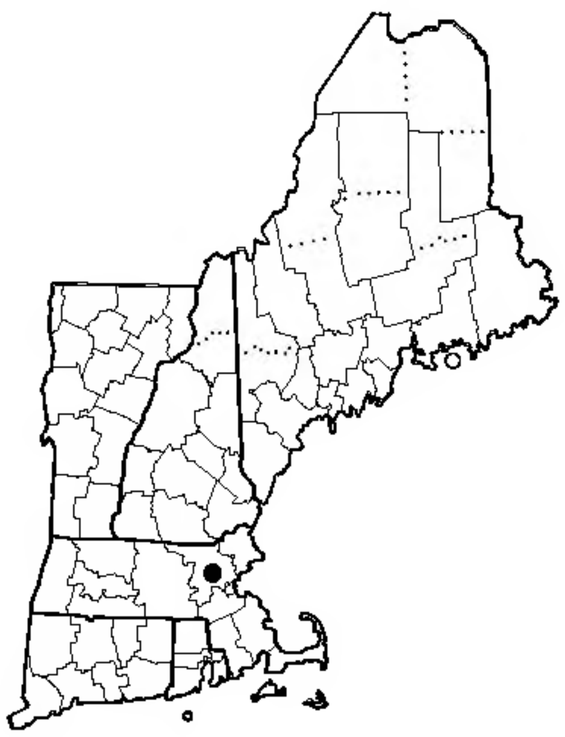
Viola affinis
X *V. nephrophylla*



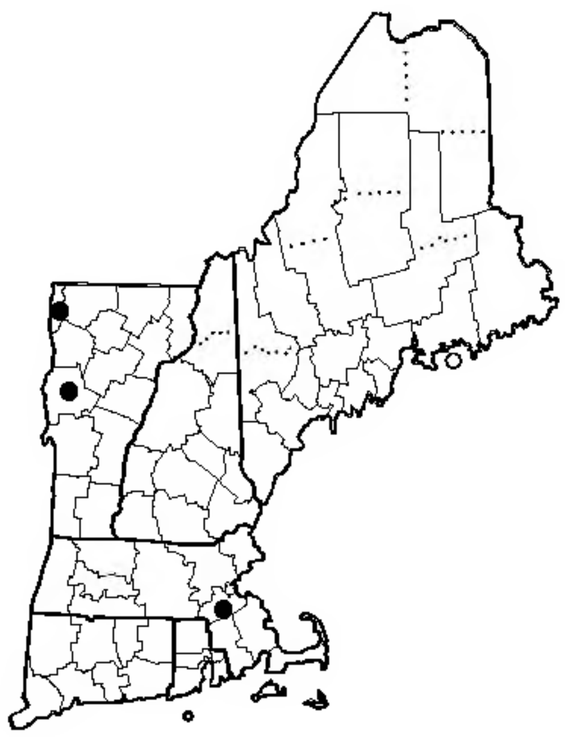
Viola affinis
X *V. palmata* var. *palmata*



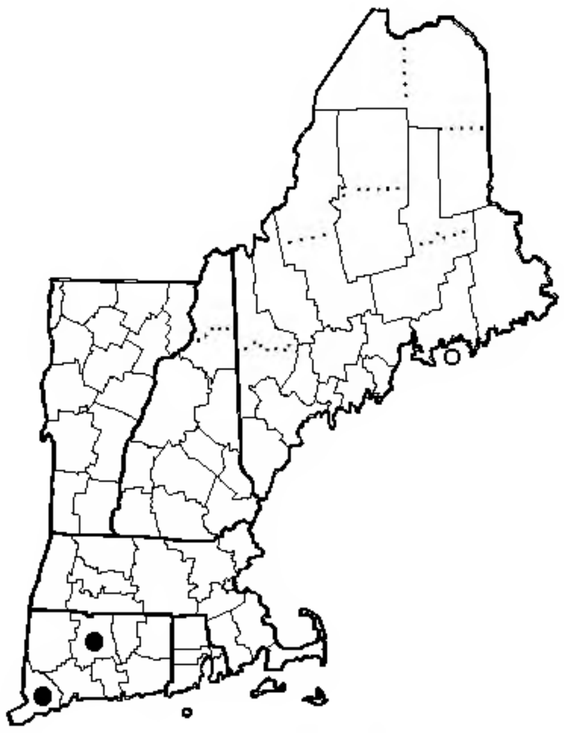
Viola affinis
X *V. sagittata* var. *sagittata*



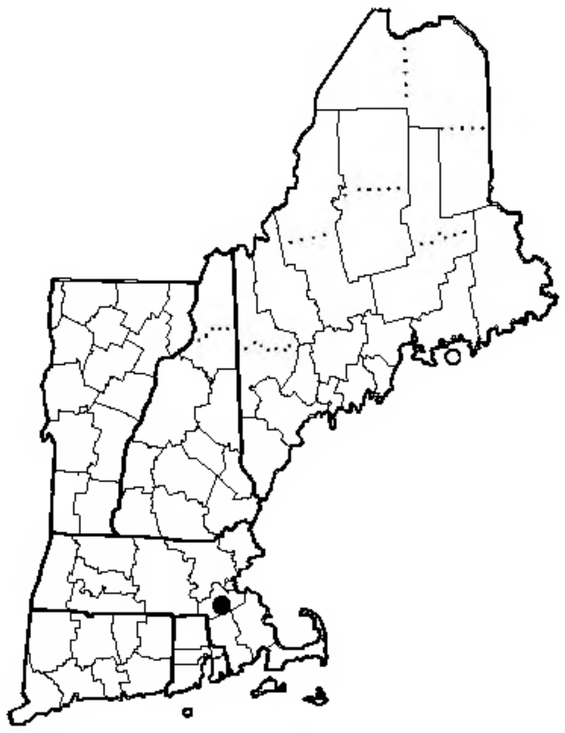
Viola affinis
X *V. sagittata* var. *ovata*



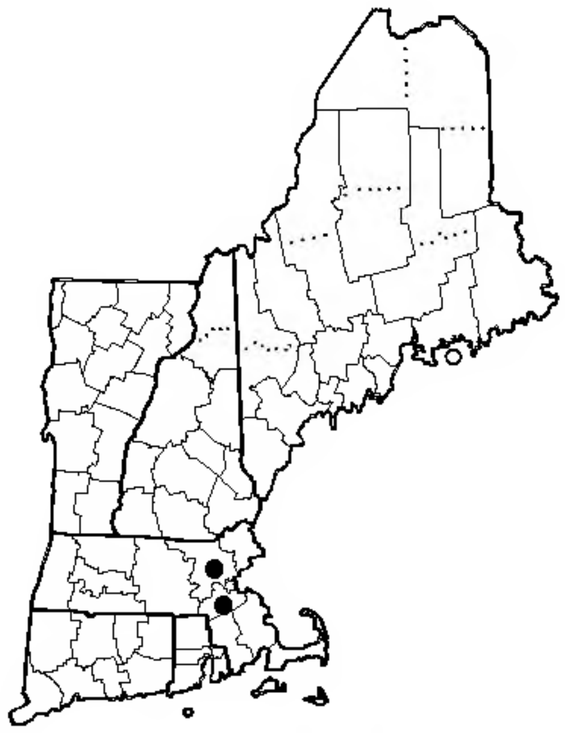
Viola affinis
X *V. sororia*



Viola brittoniana
X *V. cucullata*

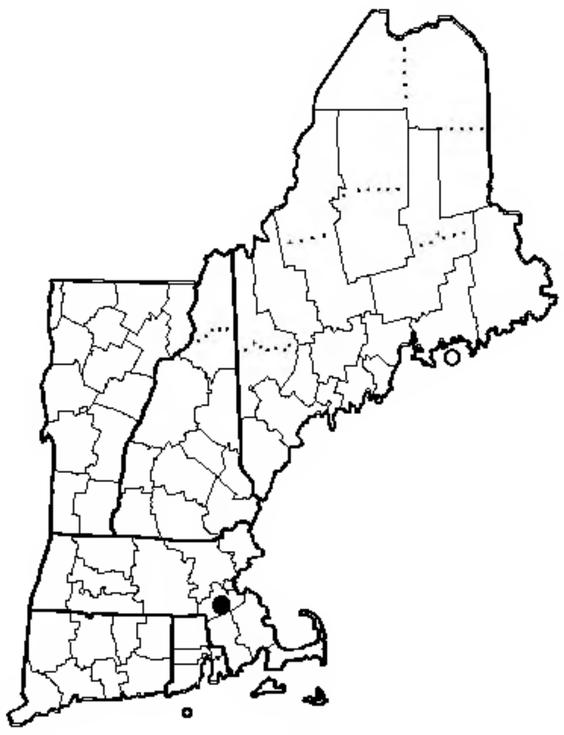


Viola brittoniana
X *V. lanceolata*

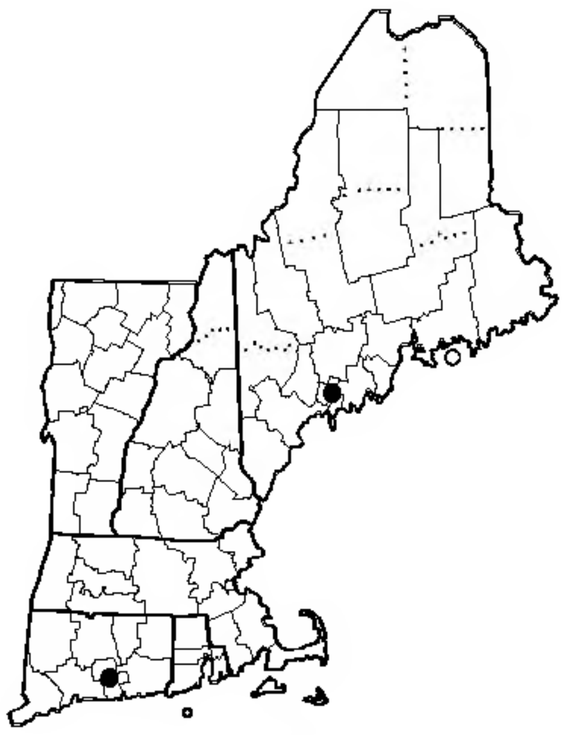


Viola brittoniana
X *V. sagittata* var. *sagittata*

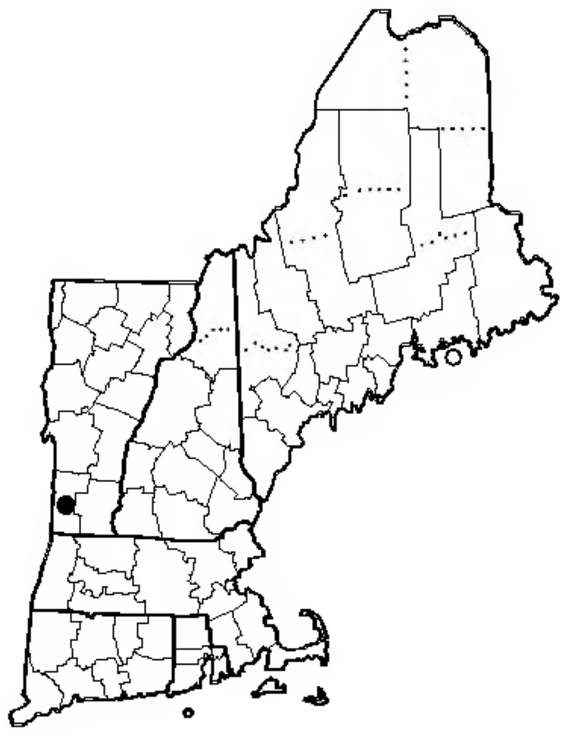
Figure 28. Distribution maps.



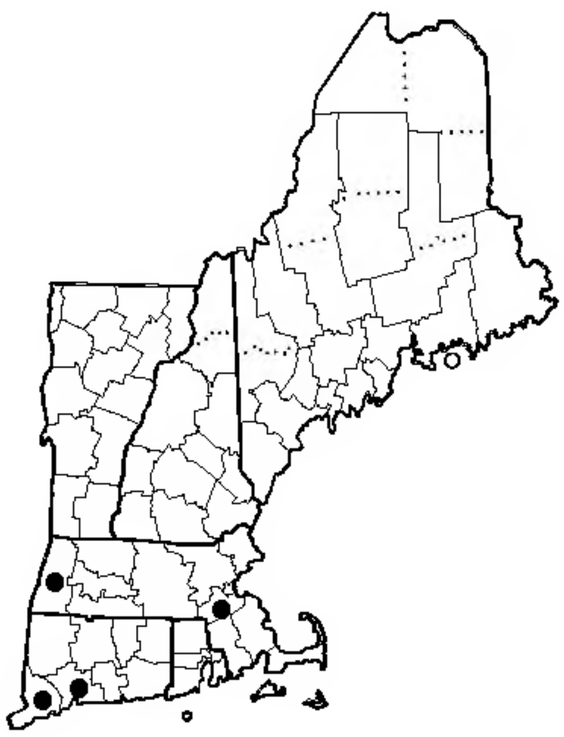
Viola brittoniana
X *V. sagittata* var. *ovata*



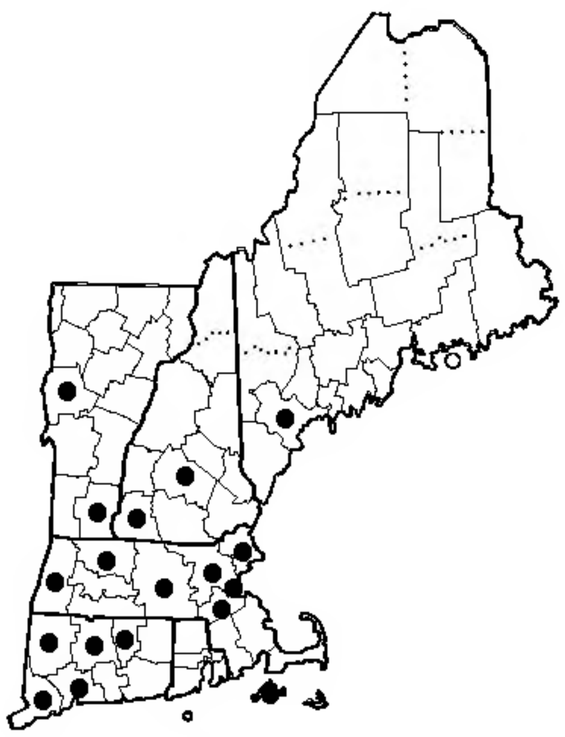
Viola brittoniana
X *V. sororia*



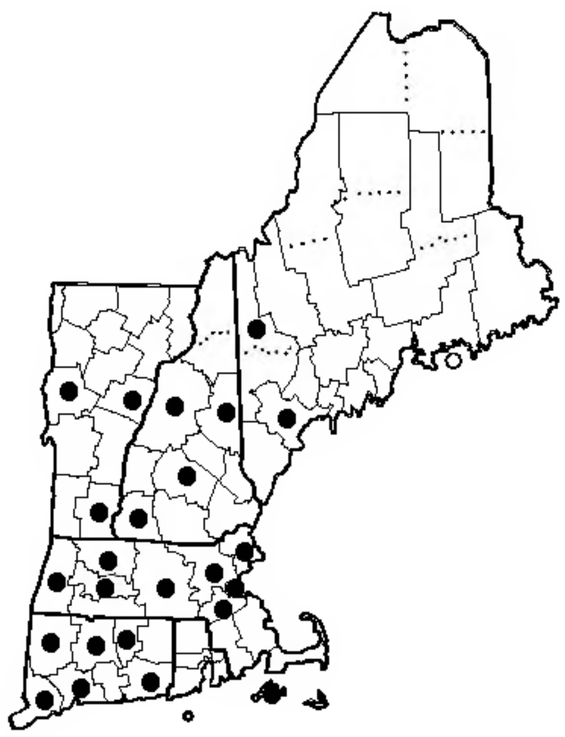
Viola cucullata
X *V. nephrophylla*



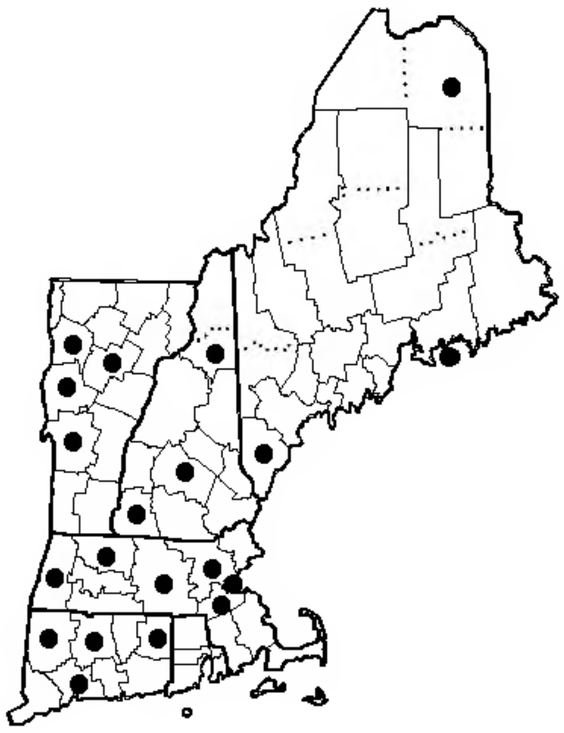
Viola cucullata
X *V. palmata* var. *palmata*



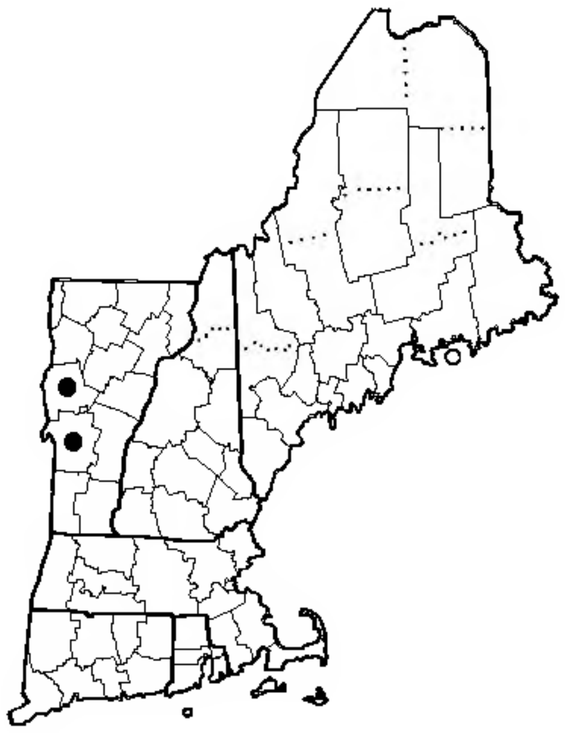
Viola cucullata
X *V. sagittata* var. *sagittata*



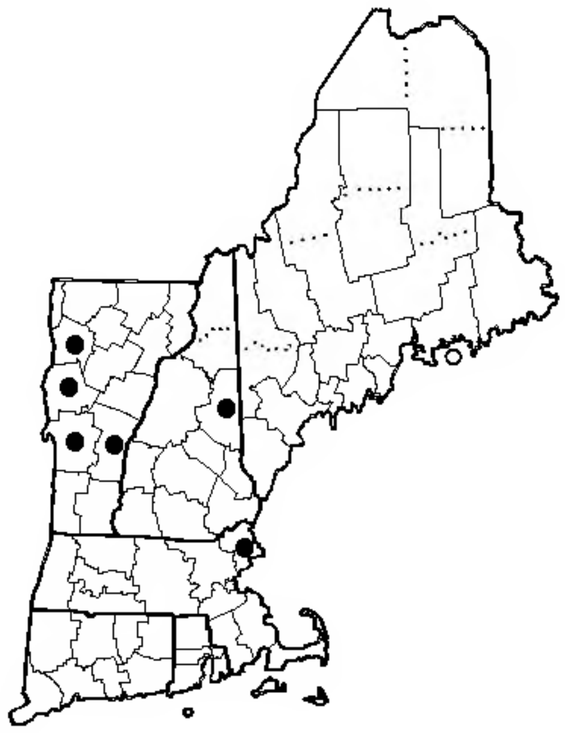
Viola cucullata
X *V. sagittata* var. *ovata*



Viola cucullata
X *V. sororia*

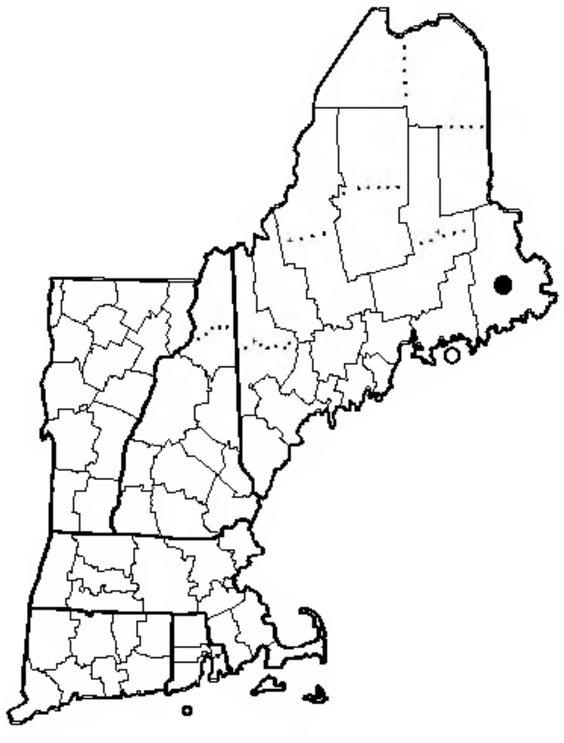


Viola labradorica
X *V. rostrata*

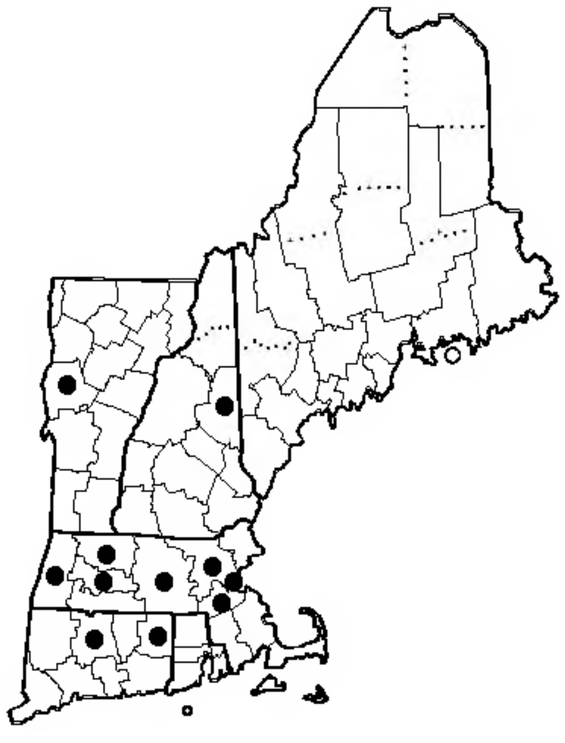


Viola labradorica
X *V. striata*

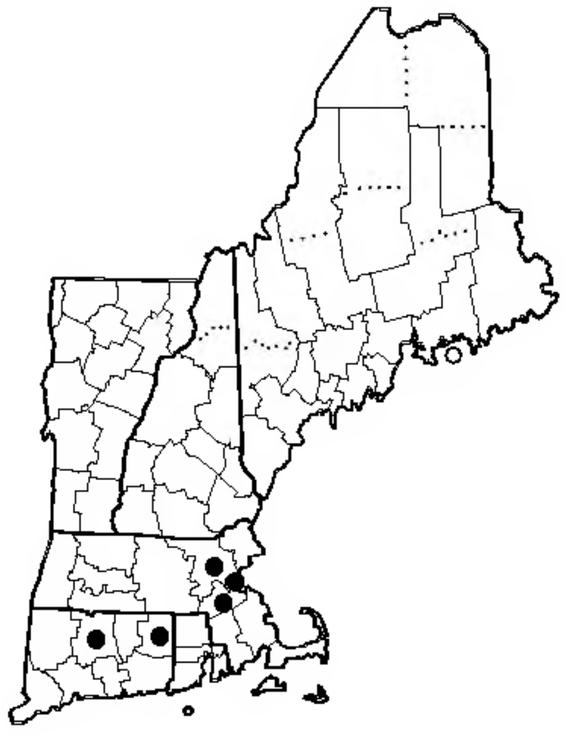
Figure 29. Distribution maps.



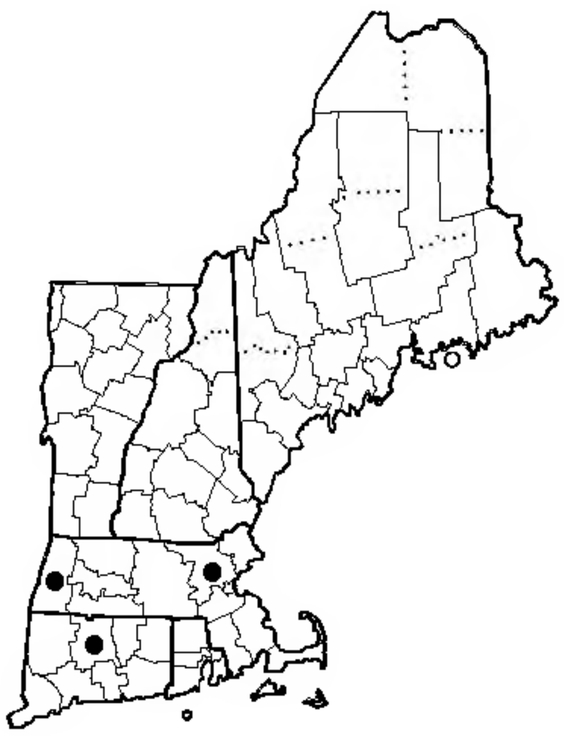
Viola lanceolata
X *V. primulifolia* var. *primulifolia*



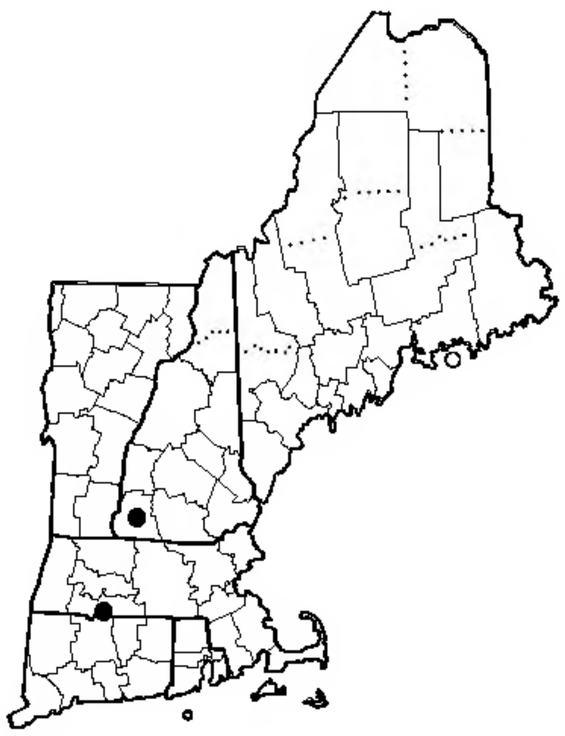
Viola palmata var. *palmata*
X *V. sagittata* var. *sagittata*



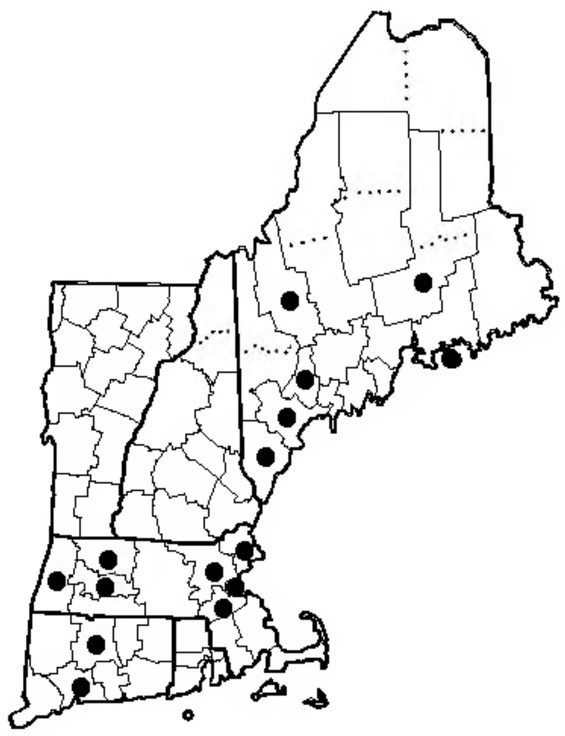
Viola palmata var. *palmata*
X *V. sagittata* var. *ovata*



Viola palmata var. *palmata*
X *V. sororia*



Viola sagittata var. *sagittata*
X *V. sororia*



Viola sagittata var. *ovata*
X *V. sororia*

Figure 30. Distribution maps.